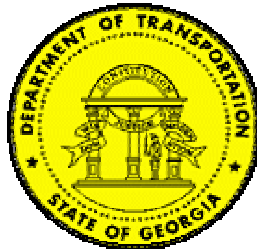


# **High Priority Corridor Six Corridor Management Plan**

## **Final Report**

for the Georgia Department of Transportation



Submitted by



Day Wilburn Associates, Inc.

In Association with

Cambridge Systematics, Inc.

Greenhorne & O'Mara, Inc.

Ralph Whitehead Associates, Inc.

Edwards - Pitman Environmental, Inc.

E - Squared Engineering

Dr. Douglas Bachtel

**January 2003**

"The contents in this publication reflect the views of the author(s), who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Georgia Department of Transportation or the Federal Highway Administration. This publication does not constitute a standard, specification or regulation."



# Central Georgia HPC 6 Corridor Management Plan

## T ABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	<b>Executive Summary .....</b>	<b>E-1</b>
	Introduction.....	E-1
	Study Background.....	E-3
	Outreach and Public Involvement .....	E-5
	Overview of Methodology .....	E-6
	Project Development.....	E-8
	Projects Recommended for NCPD Funding.....	E-11
	Next Steps.....	E-13
	Conclusion.....	E-13
<b>1</b>	<b>Study Overview .....</b>	<b>1-1</b>
	Background .....	1-1
	Study Approach.....	1-3
	Outreach and Public Involvement .....	1-4
	Plan Development .....	1-6
<b>2</b>	<b>Corridor and Transportation System Evaluation .....</b>	<b>2-1</b>
	Corridor Evaluation .....	2-1
	Intermodal Transportation System Evaluation.....	2-7
	Summary of Key Findings .....	2-18
<b>3</b>	<b>Development, Evaluation, and Selection of Recommended Improvements ...</b>	<b>3-1</b>
	Overview of the Approach/Methodology .....	3-1
	Alternative Improvements .....	3-9
	Evaluation of System Performance .....	3-17
	Summary of Key Findings .....	3-25
<b>4</b>	<b>Implementation Program.....</b>	<b>4-1</b>
	Project Phasing.....	4-1
	Funding Sources .....	4-8
	Recommended Central Georgia HPC 6 Corridor Program.....	4-8
<b>5</b>	<b>Central Georgia HPC 6 Corridor Program.....</b>	<b>5-1</b>
	Recommended NCPD Projects.....	5-1
	Next Steps.....	5-5
<b>Appendices</b>		
	<b>A - Project Worksheets</b>	
	<b>B - Funding Sources</b>	
	<b>C - STAA/NHS/STRAHNET Maps</b>	
	<b>D - NCPD Project Worksheets</b>	





## Central Georgia HPC 6 Corridor Management Plan

### FIGURES

<u>Title</u>	<u>Page</u>
Figure E.1 High Priority Corridor Six.....	E-2
Figure E.2 Central Georgia Corridor Study Area Map .....	E-2
Figure E.3 Economic Vitality Index .....	E-4
Figure E.4 Deficiency Screening Process.....	E-7
Figure E.5 NCPD Project Locations .....	E-12
Figure 1.1 High Priority Corridor Six.....	1-2
Figure 1.2 Central Georgia Corridor Study Area Map .....	1-2
Figure 2.1 Economic Vitality Index .....	2-2
Figure 2.2 Study Area Population .....	2-4
Figure 2.3 Study Area Employment.....	2-4
Figure 2.4 Leading Commodity Types .....	2-5
Figure 2.5 Study Area Commodity Flows.....	2-7
Figure 2.6 1998 Total Daily Truck Trips .....	2-9
Figure 2.7 2025 Total Daily Truck Trips.....	2-10
Figure 2.8 1998 Non Freight AADT.....	2-11
Figure 2.9 2025 Non Freight AADT.....	2-12
Figure 2.10 1998 and 2025 Volume to Capacity .....	2-13
Figure 2.11 Governor's Road Improvement Program .....	2-14
Figure 2.12 Construction Work Program .....	2-15
Figure 2.13 At Grade Railroad Crossings on Connecting Roads .....	2-17
Figure 3.1 Deficiency Screening Process.....	3-2
Figure 3.2 Port of Savannah Intermodal Terminal Road Crossing.....	3-7
Figure 3.3 2025 No Build Committed Improvements.....	3-10
Figure 3.4 2025 No Build Committed Number of Lanes .....	3-11
Figure 3.5 2025 Alternative 1 Improvements .....	3-15
Figure 3.6 2025 Alternative 1 Number of Lanes .....	3-16
Figure 3.7 2025 Alternative 2 Improvements .....	3-18
Figure 3.8 2025 Alternative 2 Number of Lanes .....	3-19
Figure 3.9 2025 Alternative 2 Changes in Daily Truck Volume .....	3-20
Figure 3.10 2025 Alternative 2 Changes in Daily Truck Volume - SR 96 Detail.....	3-21
Figure 4.1 Project Locations.....	4-2
Figure 5.1 NCPD Project Location Map.....	5-2
Figure 5.2 A NCPD 1 Location Map.....	5-6
Figure 5.2 B NCPD 1 Concept Sketch.....	5-7
Figure 5.3 NCPD 2 Location Map.....	5-8
Figure 5.4 A NCPD 3 Location Map.....	5-9
Figure 5.4 B NCPD 3 Concept Sketch.....	5-10



## Central Georgia HPC 6 Corridor Management Plan

Figure 5.5 A	NCPD 4 Location Map.....	5-11
Figure 5.5 B	NCPD 4 Concept Sketch.....	5-12
Figure 5.6 A	NCPD 5 Location Map.....	5-13
Figure 5.6 B	NCPD 5 Concept Sketch.....	5-14
Figure 5.7 A	NCPD 6 Location Map.....	5-15
Figure 5.7 B	NCPD 6 Concept Sketch.....	5-16
Figure 5.8 A	NCP 7 Location Map.....	5-17
Figure 5.8 B	NCPD 7 Concept Sketch.....	5-18

## TABLES

Table E.1	Projects .....	E-8
Table E.2	NCPD Projects .....	E-11
Table 3.1	IDAS Output Performance Measures .....	3-8
Table 3.2	List of Projects .....	3-12
Table 3.3	System Performance Alternative 1 vs. No Build.....	3-22
Table 3.4	System Performance Alternative 2 vs. No Build.....	3-23
Table 3.5	Benefit Summary Alternative 1 .....	3-24
Table 3.6	Benefit Summary Alternative 2 .....	3-24
Table 4.1	Project Phases and Cost Estimates.....	4-3
Table 4.2	Projects Recommended for NCPD Funding.....	4-9
Table 5.1	NCPD Projects and Cost Estimates.....	5-4



### Executive Summary

#### Introduction

The United States Department of Transportation (USDOT) awarded the Georgia Department of Transportation (GDOT) a National Corridor Planning and Development (NCPD) Program grant in May 1999. The purpose of the grant was to evaluate the central Georgia portion of the strategic east-west freight corridor, designated as High Priority Corridor Six (HPC 6), and make recommendations to more expediently connect Georgia's Atlantic ports to the west. HPC 6 is one of 44 high priority corridors identified by Congress and one of two located in Georgia. HPC 6 follows I-16, SR 96, and US 80 in Georgia and continues along US 80 through Alabama to Meridian, Mississippi (Figure E.1).

GDOT broadened the study to include a thorough evaluation of transportation, commodity movement, and economic development in a 45-county study area in south central Georgia (Figure E.2). Anchored by Columbus on the west, Savannah/Brunswick on the east, and Macon/Warner Robins in the center, central Georgia's study area encompasses both rural and urban counties strategically located to grow into a stronger and more influential "engine" driving the state's economy south of Atlanta. US 280, recently designated as a GRIP<sup>1</sup> corridor, was specifically studied as another east-west freight movement and economic development route. The findings and recommendations for US 280 are presented in a separate report.

The NCPD Program is a discretionary grant program funded by a single federal funding source. The purpose of the NCPD Program is to provide allocations to states and metropolitan planning organizations (MPOs) for coordinated planning, design, and construction of corridors of national significance that support economic growth and international or interregional trade. Initially envisioned as a competitive discretionary funding source for projects selected by the Federal Highway Administration, the program has evolved to one through which projects are selected by Congressional earmark in the yearly transportation appropriation cycle. NCPD funding is limited and highly competitive throughout the nation.

Freight movement along HPC 6 includes movement of military personnel and ordinance between Fort Benning, Warner Robins Air Force Base, Fort Stewart, Hunter Army Airfield, and the Port of Savannah. The importance of the corridor is magnified by the location of these installations and their transportation needs.

---

<sup>1</sup> The GRIP program (Governor's Road Improvement Program) was designed to ensure that 98% of all areas in Georgia would be within 20 miles of a four-lane road.



## Central Georgia HPC 6 Corridor Management Plan

Figure E.1: High Priority Corridor Six

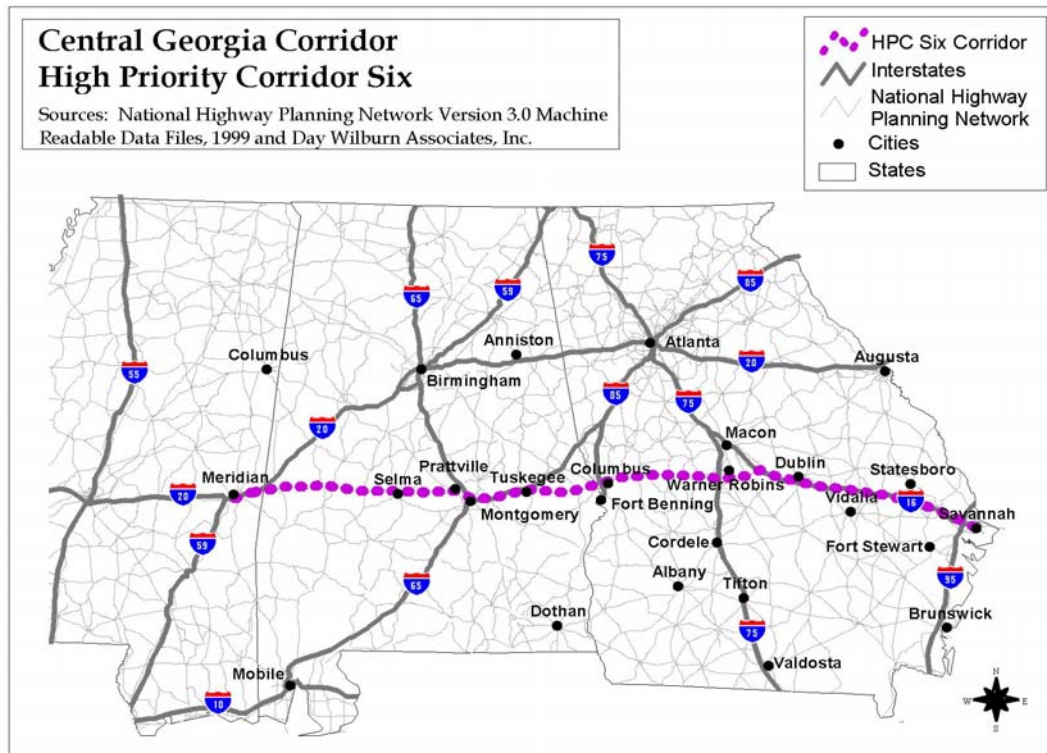
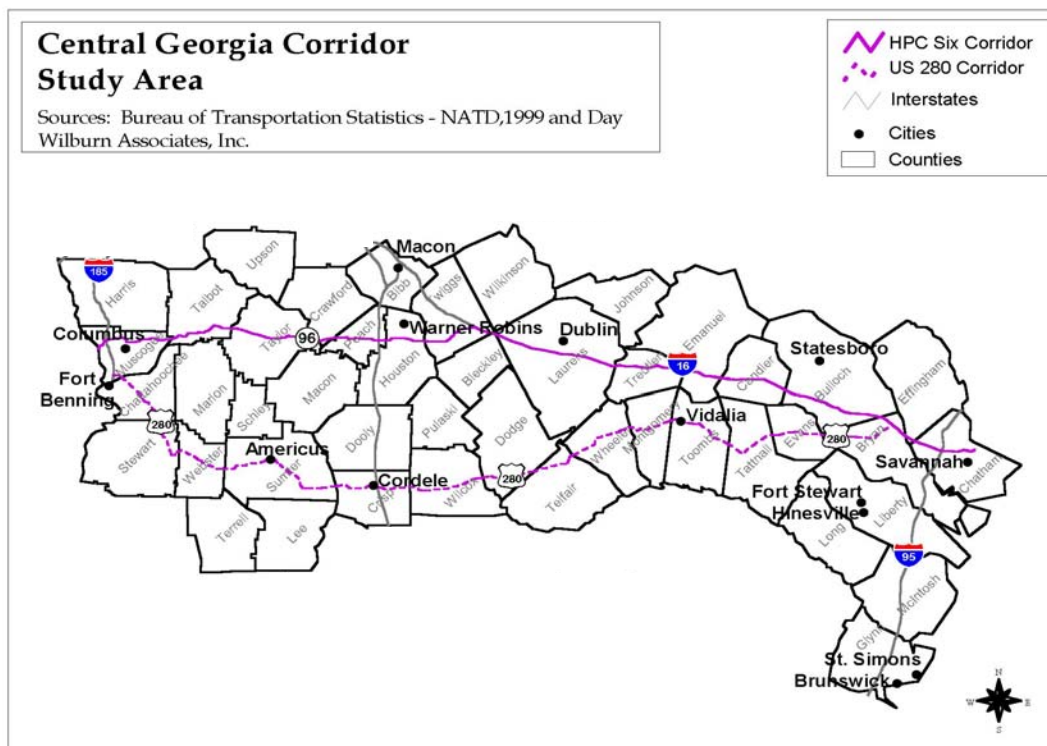


Figure E.2: Central Georgia Corridor Study Area Map





### Study Background

The 45-county study area features a diverse population, often characterized by low income, high poverty, and high unemployment in comparison to the state averages. In 2000, two initiatives addressed economic and transportation conditions in Georgia. The Georgia Rural Development Council (GRDC), together with the Georgia Institute of Technology, developed *The State of Rural Georgia Report*. *The Power Alley Initiative: An Assessment of the Economic Development Potential of State Infrastructure Investment in South Georgia* was prepared by the University of Georgia's Carl Vinson Institute in December 2000. The two initiatives concluded that coordinated and customized investment strategy in central Georgia is necessary to overcome these negative characteristics. The study identified that one key factor to sustain community growth is to maximize investment return through transportation infrastructure improvement. The studies also determined that additional investments in communication infrastructure, housing availability, or other economic investments, as opposed to transportation infrastructure alone, are often key to overall sustained community growth. Along with capital investments, strong and active leadership were also recommended for successful community development.

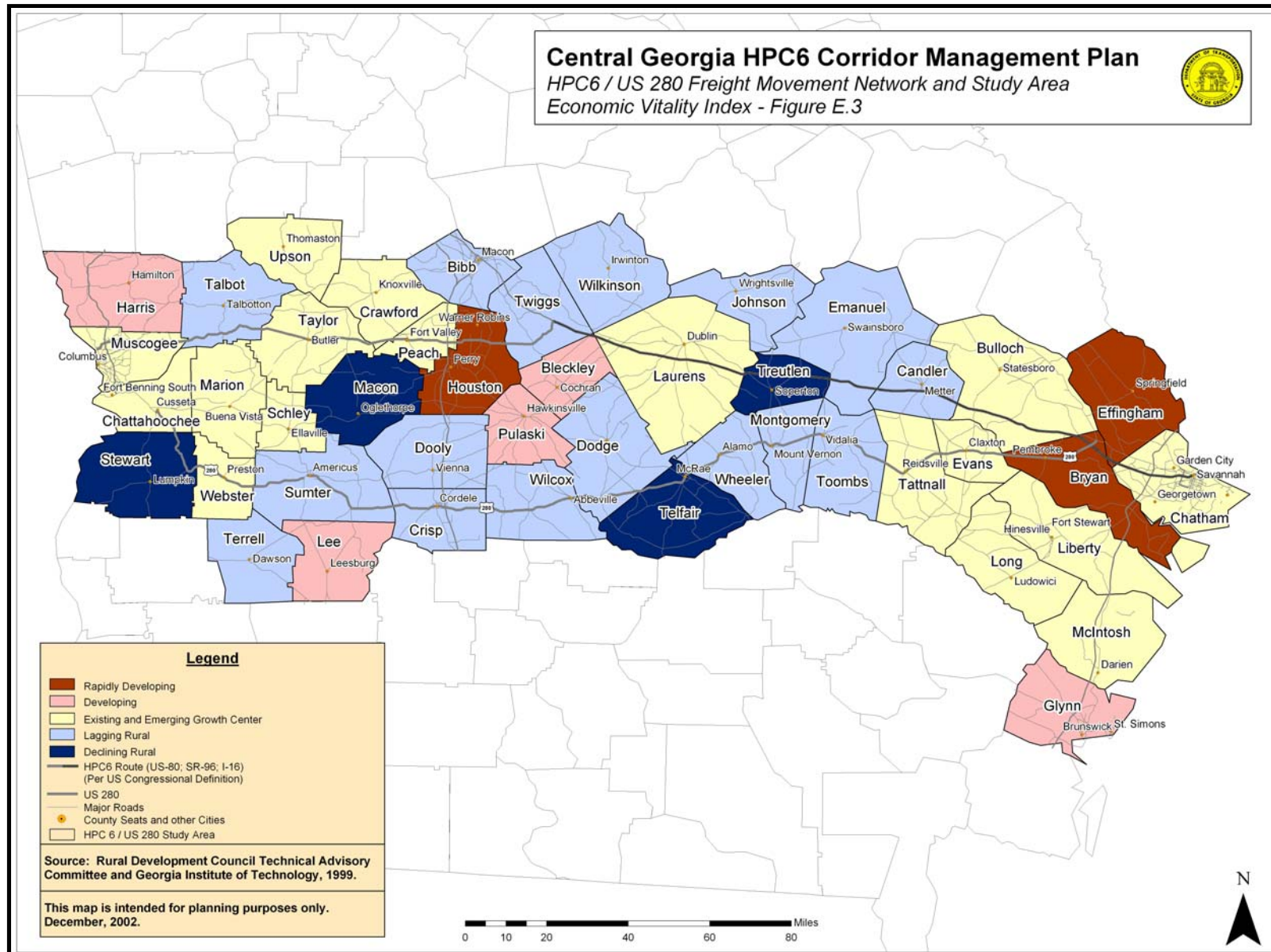
The GRDC's "Economic Vitality Index" is useful in identifying "Rapidly Developing" to "Declining" counties across Georgia. Counties in Georgia have been assigned to one of four tiers based on unemployment rates, poverty rates, and per capita income. Twenty-five of the 45 counties in the study area are classified as Rapidly Developing, Developing, or Existing/Emerging Growth Centers as shown in Figure E.3. The GRDC found these designations as representative of the potential to stimulate growth. The GRDC encourages investment in the corridor, and the Power Alley Initiative recommended focused investment in these 25 counties to create a "corridor of essential infrastructure" between Columbus and Savannah.

Building on the Economic Vitality Index, the ability of transportation infrastructure investment to promote community growth was analyzed using a Transportation Accessibility Index. The Transportation Accessibility Index reflects accessibility of counties to Interstates, commercial airports, business airports of regional impact, intermodal terminals, multi-lane highways, and major rail carriers. Decisions about transportation investment can be better considered by examining both indexes together. A county with a good (growing or emerging) economy and poor transportation access would be an excellent candidate for transportation improvements. Conversely, a county with a poor economy and high access may not need additional transportation investments, but may place more focus on other economic or social issues constraining growth and development.

To identify the specific transportation investment strategies necessary to enhance freight movement capability along HPC 6, the study team utilized several methods of data gathering and analysis. Technical data, along with input from stakeholders and



Figure E.3: Economic Vitality Index





## Central Georgia HPC 6 Corridor Management Plan

major users of the freight transportation system, was analyzed to identify potential transportation deficiencies in the study area.

### Outreach and Public Involvement

The primary goal of the outreach process was to create ample and ongoing opportunities for input into the development of the HPC 6 Corridor Management Plan. This was accomplished primarily through a series of regional stakeholder meetings held at critical points during plan development when focused input was needed to identify deficiencies and review proposed improvements. A representative group of stakeholders knowledgeable about transportation needs within their region was present at each meeting.

The stakeholder advisory committee, which functioned as an advisory group to the study team, was comprised of approximately 2,000 members selected from organizations directly impacted by the performance of the region's transportation system. Stakeholders were selected from a variety of backgrounds including government, industry, transportation, economic development, planning and engineering, public safety, trade, tourism, and special interest topics. The group included shippers, receivers, and freight carriers across all freight modes, regional advisory councils, chambers of commerce, development authorities, and individual citizens.

Interviews were conducted with a sampling of shippers and receivers and economic development officials throughout the region. The interviews enabled the study team to understand freight operations in the corridor and problems the users encounter. Approximately 250 shippers and receivers were contacted to provide input regarding freight movement operations, transportation problems, and potential solutions for problem areas. The interview results provided helpful information for the study team to use in identifying improvements to the freight movement network.

In addition to the stakeholder meetings, GDOT staff and consultant team members participated in GRDC meetings throughout the study area to provide information and gain public input. Study information was also disseminated through newsletters, distributed at the completion of each phase, and a study website. Each newsletter provided study information and status reports, opportunities for direct public participation, and key project contacts and sources for additional information. The availability of regular study updates and information was further ensured through the use of GDOT's website, which posted newsletters, presentations, maps, and contact information.

Significant input was received throughout the study as a result of the extensive public outreach. Congestion in small downtown areas was often noted during stakeholder outreach activities. In some cases, stakeholders suggested constructing bypass routes around the towns while in other cases they asked that Intelligent Transportation System





(ITS) technology involving the use of changeable message signs and cameras to improve traffic flow be considered. Signage deficiencies were noted, as well as recommended locations for turn lanes, acceleration lanes, and deceleration lanes. Safety was a prime concern at all meetings, with stakeholders pointing out deficient intersections and roadway conditions. At-grade intersections with railroad crossings were a primary concern to the stakeholders due to the delays experienced.

Interstate interchanges with safety and/or operational needs were noted, along with improvements for military transport within the corridor. Improvement of economic development roadways, such as the widening of US 280 to four lanes, was also mentioned in stakeholder meetings, and their completion is eagerly anticipated.

### Overview of Methodology

Transportation system deficiencies were identified through various methods. Technical data from the Road Characteristics Inventory (RCI) and Highway Performance Monitoring System (HPMS) databases were reviewed. These databases, maintained by GDOT and USDOT, provide current and historic information about the state's highway system. Interviews with stakeholders, including Regional Development Center (RDC) staff, economic development organization members, and GDOT staff, were conducted to identify potential deficient locations. Study team members also observed and noted deficiencies during numerous field visits and inventories.

The first two phases of the study involved evaluation of the transportation system and the identification of transportation deficiencies in the study area. Identified deficiencies were then screened in Phase 3 to determine those with both a definite freight focus and congestion or safety-based need for improvement. Figure E.4 illustrates the deficiency screening process. The first screen identified all routes in the study area that were freight-focused by virtue of being on the Strategic Highway Network System (STRAHNET)<sup>2</sup>. All identified deficiencies located on the STRAHNET were considered to be freight-focused. Roadways not located on STRAHNET, but carrying above average percentages of truck traffic, were also considered to have a freight focus. Since average truck traffic for roadways in the study area was 8.5%, this was considered to be the logical threshold. Statistics from the 1998 or 2001 HPMS database were used to determine current truck traffic percentages, as well 2025 forecast truck traffic.

The next screen of deficiencies evaluated congestion or safety problem areas. A volume to capacity (v/c) ratio of 0.7 or greater was the threshold for identifying present and future potentially deficient locations. A v/c ratio is used to determine the volume of traffic on a roadway in relation to the capacity of the roadway. The higher a v/c ratio, the greater the level of roadway congestion. This threshold of 0.7 is lower than that used for urbanized areas (usually 0.8 to 1.0) because congestion in less populated areas is felt more keenly at lower levels and is less expected.

---

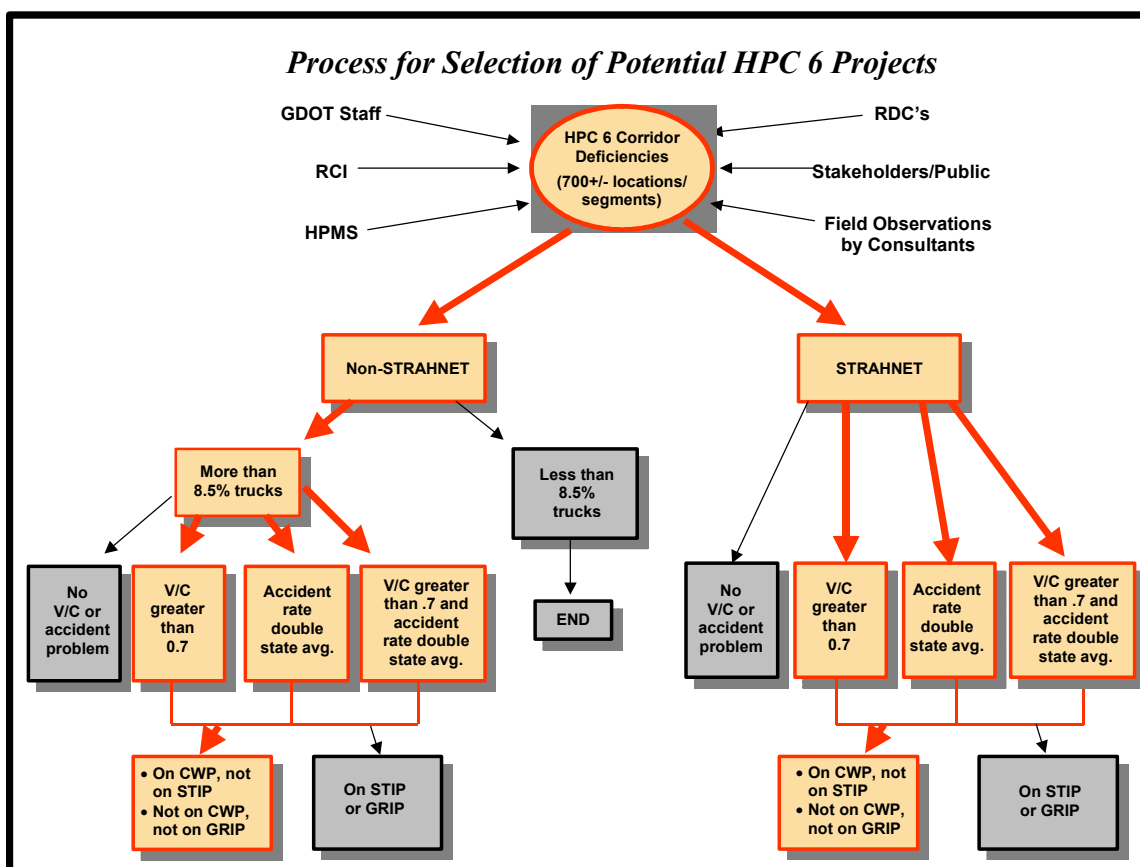
<sup>2</sup> STRAHNET is a system of public highways that provides access, continuity, and emergency transportation of personnel and equipment in times of peace and war.





## Central Georgia HPC 6 Corridor Management Plan

Figure E.4: Deficiency Screening Process



Safety-related deficient locations were identified as those with accident rates equal to or greater than double the statewide average. By utilizing a standard of accident rates double the statewide average, the study team was able to greatly narrow the list to those locations with the most serious potential safety needs<sup>3</sup>.

The final screen identified locations with a project programmed in the Statewide Transportation Improvement Program<sup>4</sup> (STIP) or included in the GRIP. Deficiencies with projects included in either of these programs were considered to have a solution identified and were, therefore, not carried forward in the evaluation process.

Hundreds of potential deficiencies were identified and screened through the process described above. The screening process resulted in a list of 34 deficient locations for which projects were developed.

<sup>3</sup> The list of identified deficiencies including safety-related locations is included in the Phase 2 Report, Chapter 5.

<sup>4</sup> The STIP is an annual, financially constrained list of projects programmed by GDOT for the next three years. Funding has been identified and secured for all projects listed in the three-year STIP.



## Central Georgia HPC 6 Corridor Management Plan

### Project Development

Project descriptions were developed for the final 34 identified deficient locations or roadway segments, along with cost estimates and recommended implementation phases (short, mid, or long-range). Implementation phasing for the projects located on the Interstate system were deferred for further analysis during development of the Georgia Interstate System Plan, currently underway and scheduled for completion in early 2004. The project descriptions, cost estimates, and recommended phases are shown in Table E.1.

In addition to the 34 projects, many of the deficiencies identified during the study were recommended for implementation as best practices during future construction or rehabilitation of existing intersections, roadways, or bridges. These recommended best practices consist of shoulder widenings, including the inside shoulders of Interstates; standards for future bridge replacements; intersection resurfacing; railroad crossing grade separations; passing lanes; and white topping (concrete overlay on asphalt) at high truck movement intersections. The locations that would benefit from the implementation of these practices were presented as Appendices D-H to the Phase 2 report.

**Table E.1: Projects**

MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	COST ESTIMATE	PHASE*
SR 307/ I-16	Chatham	SR 307 (Dean Forest Road)/I-16 Interchange improvement	\$27,774,440	S
New Location	Chatham	Jimmy DeLoach Parkway Extension from SR 21 to SR 25	\$15,137,043	S
SR 96	Houston	Phase 1 of 5: Operational improvements, intersection improvements, and turn lanes on SR 96 between I-75 and SR 247	\$25,785,772	S
SR 96	Peach	Connect Fort Valley Bypass (SR 49C) to SR 96 east of Fort Valley connecting existing bypass to SR 96	\$16,061,847	S
Subtotal			\$84,759,102	
SR 49	Bibb	Widen SR 49 from five lanes to six lanes divided from Maynard Street to New Clinton Road	\$20,314,355	M
US 41	Bibb	Widen US 41 from five lanes to six lanes divided between US 129 and I-75	\$7,545,000	M
US 301 BYPASS	Bulloch	Widen US 301 from two to four lanes divided from US 80 to SR 67	\$3,991,972	M
SR 204	Chatham	Reconstruct SR 204 from four-lane arterial to six-lane freeway from US 17 to Veterans Parkway	\$29,475,873	M

\* S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred to Interstate System Plan



## Central Georgia HPC 6 Corridor Management Plan

**Table E.1: Projects (cont'd.)**

MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	COST ESTIMATE	PHASE*
SR 21 SPUR	Chatham	Widen SR 21 Spur from two lanes to five lanes from SR 25 E to end of road	\$13,018,714	M
SR 96	Houston	Phase 2 of 5: Operational and grade separation improvements on SR 96 between I-75 and Ocmulgee River	\$67,985,990	M
SR 96	Houston	Phase 3 of 5: Purchase ROW for future four-lane divided roadway and frontage roads on SR 96 between Lake Joy Road and Thompson Mill Road	\$95,811,467	M
SR 119	Liberty	Widen the common part of SR 119 and SR 196 from four lanes to six lanes	\$24,491,990	M
US 80	Muscogee	Widen US 80 from the Alabama state line to I-185 from four lanes to six lanes	\$17,419,612	M
Subtotal			\$280,054,973	
US 129	Bibb	Widen US 129 from four to six lanes from .5 miles north of SR 49 to .5 miles north of North Graham Road and widen US 129 from six to eight lanes from US 23 to .5 miles north of SR 49	\$44,795,300	L
US 41	Bibb	Widen US 41 between Houston Road and US 129 from six to eight lanes	\$42,232,167	L
US 129	Bibb	Widen US 129 from six to eight lanes from I-16 EB exit ramp to US 23/ Emery Hwy.	\$4,377,731	L
US 129	Bibb	Widen US 129 from four to six lanes divided from South Bibb County Line to SR 41	\$35,822,663	L
SR 21	Chatham	Reconstruct Derenne Avenue from I-516 to Truman Parkway as a four-lane freeway with interchange at Abercorn and Truman Parkway	\$147,944,762	L
SR 25	Chatham	Widen SR 25 from five lanes to six lanes divided from SR 25C to SR 21 Spur	\$9,142,592	L
SR 96	Houston	Phase 4 of 5: Widen SR 96 from two lanes to four-lane divided from US 41 to Thompson Mill Road	\$92,737,050	L
SR 96	Houston	Phase 5 of 5: Widen SR 96 from two lanes to four lanes from Fort Valley to US 41 and from Thompson Mill Rd to I-16	\$87,780,944	L
US 129	Houston	Widen US 129 from five lanes to six lanes divided from SR 247 C to SR 96	\$43,140,195	L
US 27	Muscogee	Construct four-lane freeway with four-lane frontage road on US 27/US 280 from Alabama state line to 1.5 miles east of I-185	\$264,901,144	L
Subtotal			\$772,874,548	

\* S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred to Interstate System Plan



## Central Georgia HPC 6 Corridor Management Plan

**Table E.1: Projects (cont'd.)**

MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	COST ESTIMATE	PHASE*
I-75	Bibb	Widen I-75 from six to eight lanes from south Bibb County line to I-475	\$17,329,096	D
I-16	Bryan	Widen I-16 from four to six lanes from east Bryan County line to US 280	\$24,143,847	D
I-95	Bryan	Widen I-95 from six to eight lanes one mile south of US 17 to north Bryan County line	\$19,274,262	D
I-16	Chatham	Widen I-16 from four to six lanes throughout Chatham County and reconstruct I-16/I-95 interchange and I-16/I-516	\$69,336,434	D
I-516	Chatham	Widen the entire I-516 corridor from four to six lanes	\$42,909,392	D
I-95	Chatham	Widen I-95 from six to eight lanes throughout Chatham County	\$93,785,574	D
I-75	Crisp	Widen I-75 from four to eight lanes throughout Crisp County	\$69,725,099	D
I-75	Dooly	Widen I-75 from six to eight lanes throughout Dooly County	\$60,801,520	D
I-16	Effingham	Widen I-16 from four to six lanes throughout Effingham County	\$11,835,970	D
I-95	Glynn	Widen I-95 from four to six lanes from US 82/17 to US 25	\$ 73,316,672	D
I-185	Harris/ Muscogee	Widen I-185 from four to six lanes from MP 12 in Muscogee County to MP 19 in Harris County	\$17,066,653	D
I-75	Houston	Widen I-75 from six to eight lanes throughout Houston County	\$62,782,783	D
I-185	Muscogee	Widen I-185 or construct parallel facility east of I-185 connecting US 280 and US 80	\$215,817,000	D
I-185	Muscogee	Widen I-185 from four to six lanes from US 80 to north Muscogee County line	\$15,900,614	D
I-75	Peach	Widen I-75 from six to eight lanes throughout Peach County	\$45,968,564	D
Subtotal			\$794,024,920	
<b>Total</b>			<b>\$2,030,695,190</b>	

\* S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred to Interstate System Plan



## Central Georgia HPC 6 Corridor Management Plan

### Projects Recommended for NCPD Funding

NCPD funding is limited and therefore very competitive among high priority corridors throughout the nation. A key focus of this study and the resultant corridor plan was to define a short list of improvements with the greatest potential for providing overall benefit to the freight-moving capacity of HPC 6.

The projects recommended for pursuit of NCPD funding are located in two general areas within the study area: SR 96 (Peach, Houston, and Twiggs Counties) south of Warner Robins and near the Port of Savannah. Projects located on the HPC 6 mainline and near the Port of Savannah provide the maximum benefit to freight and military movement along the corridor. Descriptions and cost estimates of the seven recommended projects are shown in Table E.2, with their locations illustrated in Figure E.5.

**Table E.2: NCPD Projects**

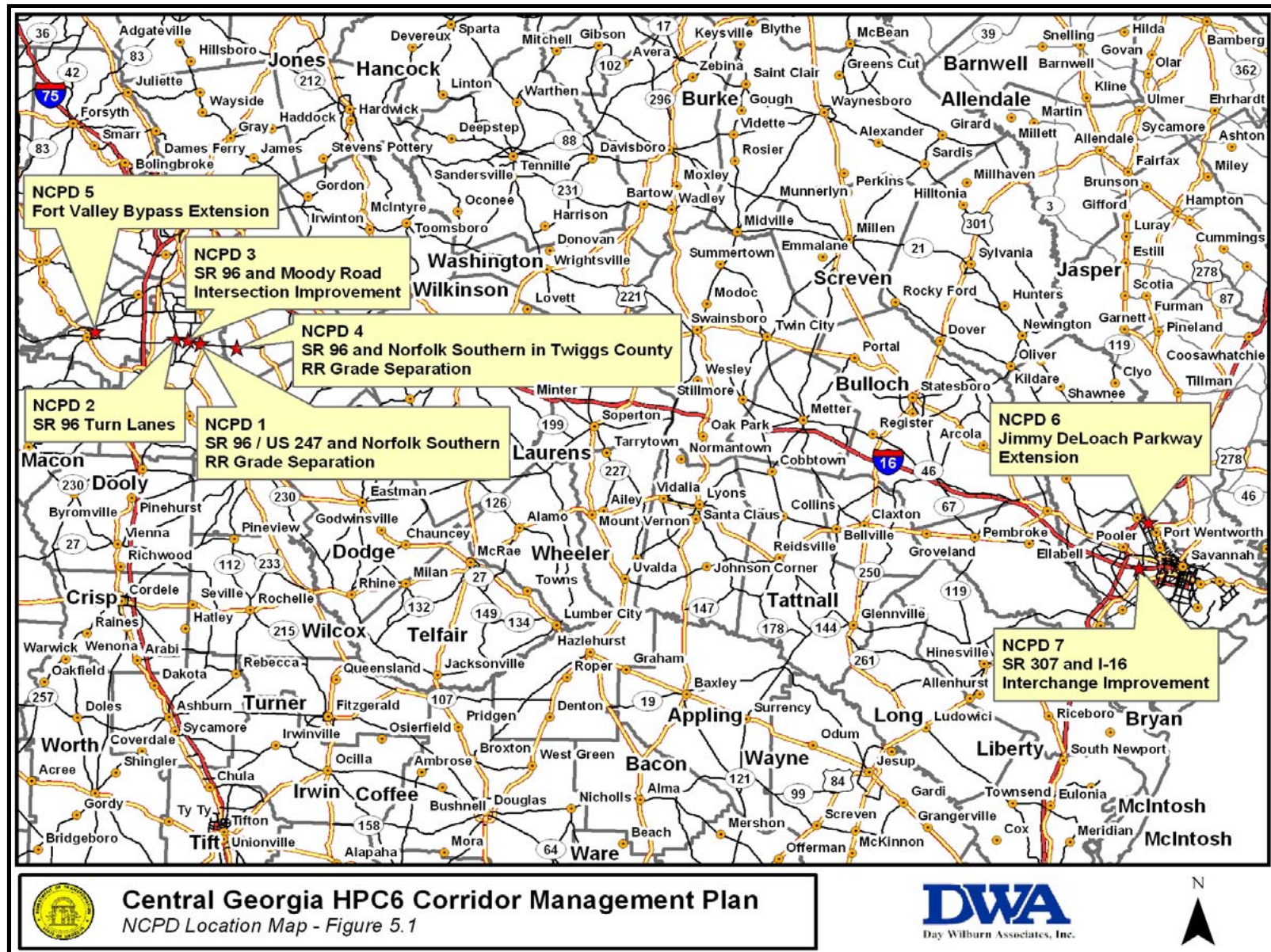
Reference Number	Project Location and General Description	Cost Estimate
NCPD 1	State Route 96/State Route 247 Intersection Improvements and Grade Separation, Houston County	\$21,128,483
NCPD 2	State Route 96 Turn Lanes, Houston County	\$801,676
NCPD 3	State Route 96/Moody Road Intersection Improvement, Houston County	\$8,755,697
NCPD 4	State Route 96/Norfolk Southern Railroad Grade Separation, Twiggs County	\$2,237,343
NCPD 5	Ft. Valley Bypass Extension Northeast of Fort Valley, Peach County	\$16,061,847
NCPD 6	Jimmy DeLoach Parkway Extension from SR 21 to SR 25, Chatham County	\$15,137,043
NCPD 7	Interstate 16/Dean Forest Road (SR 307) Interchange Improvement, Chatham County	\$27,774,440
<b>Total</b>		<b>\$91,896,529</b>

Detailed information for each project, including its location, description, need and purpose, concept sketch, and detailed cost estimate, is located in Chapter 5 and Appendix D of the HPC 6 Corridor Management Plan.





Figure E.5: NCPD Project Locations





## Central Georgia HPC 6 Corridor Management Plan

### Next Steps

GDOT will utilize the package of NCPD recommended projects to compete with other high priority corridors for NCPD funding. The solid freight movement related need and purpose developed for each project will provide a strong basis in competing for the funding. While the requirements for NCPD related funds may change under future federal transportation legislation, GDOT's need and purpose based approach for requesting NCPD funds through Georgia's Congressional delegation will provide a competitive edge for Georgia's pursuit of future NCPD funding.

In addition to the 34 projects identified for enhancing freight movement in the central Georgia corridor and the seven projects considered to be most competitive for NCPD funding, other freight movement deficiencies were identified through the study. A list of pavement, bridge, and railroad crossing deficiencies has been provided to each GDOT District Planning and Programming Engineer in the study area for their utilization in enhancing freight movement throughout the study area.

### Conclusion

During the three phases of the Central Georgia Corridor Study, data from technical analysis and interviews with stakeholders and users of the transportation system resulted in the identification of hundreds of potentially deficient locations. These freight focused locations were screened to identify those with a congestion or safety deficiency and without an identified solution. The study identified 34 deficient locations that met the criteria. Seven projects along HPC 6 that would be the most competitive for NCPD funding were defined in detail, with a freight related need and purpose statement supporting each project.

**For further details about the methodology used for the study and its results, refer to:**

Phase I Report (Corridor & Transportation System Evaluation)  
Phase II Report (Development, Evaluation, & Selection of Recommended Improvements)  
Final Report (Central Georgia HPC 6 Corridor Management Plan)

**For additional information concerning the Central Georgia Corridor Study, contact:**

Georgia Department of Transportation, Office of Planning at (404) 657-6699



# 1 Study Overview

## Background

The United States Department of Transportation (USDOT) awarded the Georgia Department of Transportation (GDOT) a National Corridor Planning and Development (NCPD) Program grant in May 1999. The purpose of the grant was to evaluate the central Georgia portion of the strategic east-west freight corridor designated as High Priority Corridor Six (HPC 6), designated to more expediently connect the Georgia's Atlantic ports to the west.

HPC 6 is one of 44 high priority corridors designated by Congress and one of two located in Georgia (Figure 1.1). The complete HPC 6 route extends from Mississippi, from the I-20 and US 80 intersection east of Meridian, through Alabama and into Georgia along US 80. HPC 6 is specifically designated in legislation as US 80 throughout. However, in intervening years, the roadway corridor has been more specifically designated in Georgia as US 80 through Muscogee and part of Talbot County; State Route (SR) 96 through Talbot, Taylor, Crawford, Peach, Houston and Twiggs Counties; and I-16 through Twiggs, Bleckley, Laurens, Treutlen, Candler, Bulloch, Bryan, Effingham, and Chatham Counties.

In order to determine the impact of other transportation facilities on HPC 6, GDOT broadened the study to include an evaluation of transportation, commodity movement, and economic development in a 45-county study area in south-central Georgia. The Central Georgia Corridor Study area, therefore, encompasses both rural and urban counties (Figure 1.2) and includes US 280, a recently designated GRIP corridor, near its southern boundary. Findings and recommendations for US 280 are presented in a separate report.

The NCPD Program, designed to fund only designated high priority corridors, is a discretionary grant program designed to provide allocations to states and metropolitan planning organizations (MPOs) for corridor feasibility, planning, design, environmental review, and construction of corridors of national significance, economic growth, and international or interregional trade. Initially envisioned as a competitive discretionary funding source for projects selected by the Federal Highway Administration, the program has evolved into one in which projects are selected by Congressional earmark in the yearly transportation appropriation cycle.





# Central Georgia HPC 6 Corridor Management Plan

Figure 1.1: High Priority Corridor Six

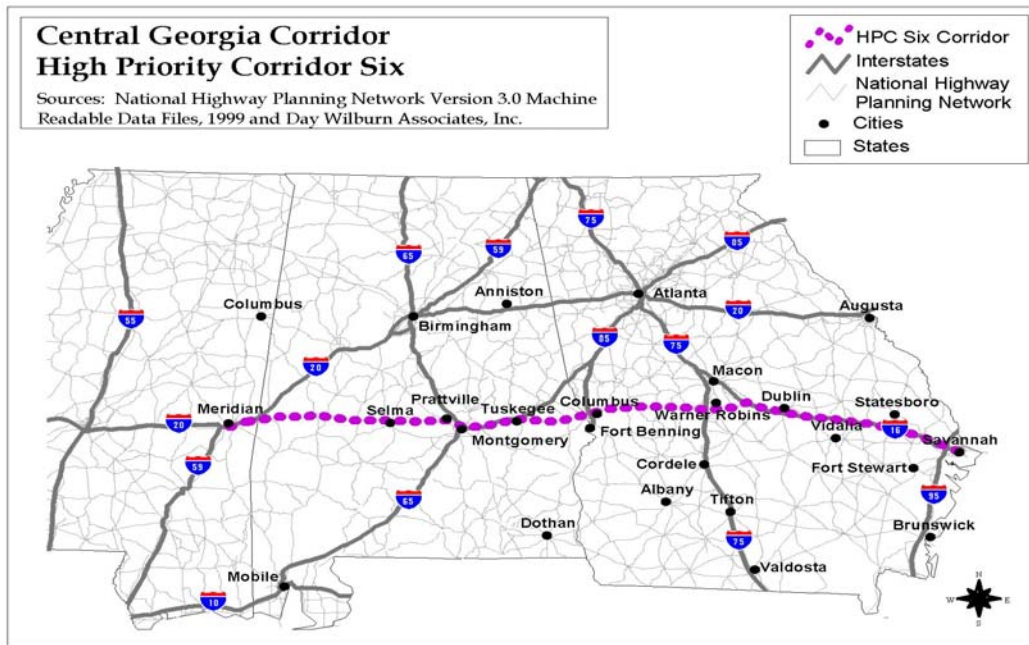
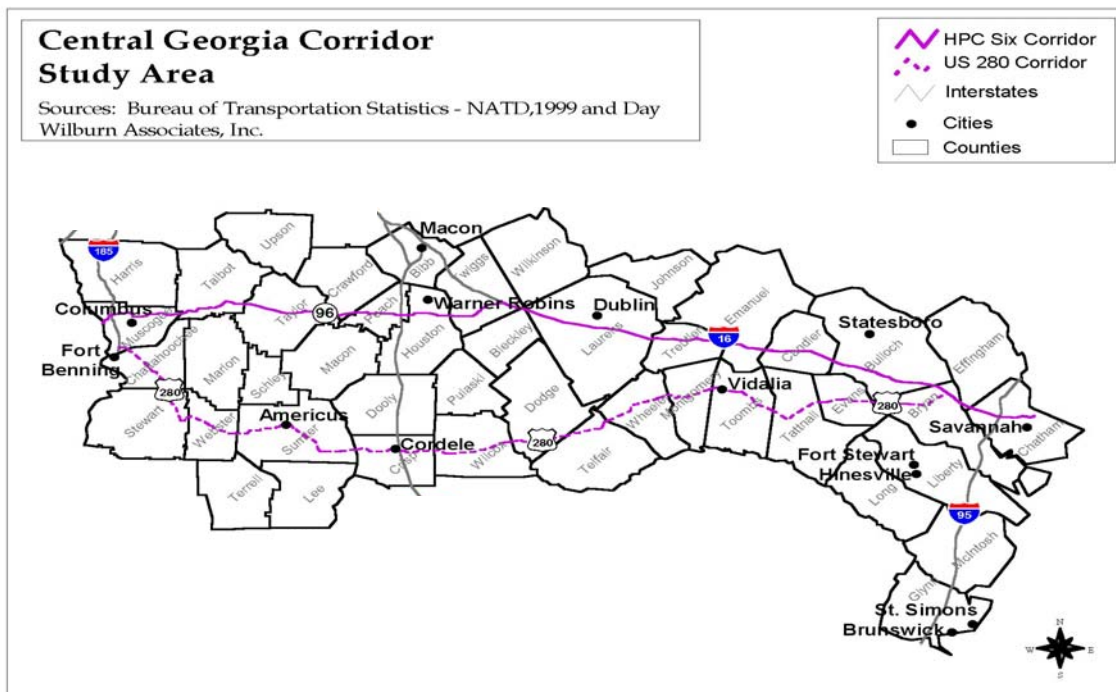


Figure 1.2: Central Georgia Corridor Study Area Map





### Study Approach

The Central Georgia Corridor Study was designed to (1) assess the area's existing transportation infrastructure by focusing on its capability to transport goods and conduct trade in the future, (2) define transportation infrastructure and related technology improvements supporting freight movement, and (3) identify potential environmental and social consequences of implementing freight movement improvements.

The study was composed of four work phases:

- Phase 1 (Corridor Transportation and System Evaluation) activities included a compilation of all activities associated with corridor evaluation elements of the scope of work. The intent of this phase of work was to provide a baseline assessment of the economies and infrastructure of central Georgia. Phase 1 findings served as the foundation for activities in Phase 2 (Development, Evaluation and Selection of Recommended Improvements) which identified short and long-term transportation infrastructure needs and potential solutions within the defined study area.
- Phase 2 (Development, Evaluation and Selection of Recommended Improvements) activities included characterizing the transportation system and defining base and future traffic conditions and, in so doing, identifying transportation deficiencies within the corridor. Commodity flow and economic profile data were used to construct baseline traffic estimates. Demographic data was used to establish background (or non-freight) traffic in areas where travel demand forecasts do not exist. Travel demand model data supplemented the traffic forecasts. Detailed information on Phase 1 and Phase 2 work is provided in Chapter 2.
- Phase 3 (Development of an Implementation Program) included a refinement of the deficiency determinations, identification of projects to improve the transportation system, and environmental screening of identified project locations. The outcome of this phase of work was the development of a plan to improve the efficiency of the HPC 6 freight movement corridor. The principal focus of this document is to present the findings and recommendations determined during the Phase 3 work.
- Phase 4 (Public Involvement and Environmental Justice) was conducted simultaneously with the work performed in the other three study phases. The outreach effort described below provided valuable direction throughout the study.



### Outreach and Public Involvement

The primary goal of the outreach process was to create ample and ongoing opportunities for input into the development of the HPC 6 Corridor Management Plan. This was accomplished primarily through a series of regional stakeholder meetings held throughout the study area. Meetings were held at points during the study when focused input into the study was needed, such as identifying deficiencies and reviewing proposed improvements. A representative group of stakeholders knowledgeable of needs within their region was present at each meeting.

A stakeholder advisory committee was organized at the beginning of the study and functioned as an advisory group to the study team throughout the study. The group was comprised of approximately 2,000 members with professional backgrounds in government, industry, transportation, economic development, planning and engineering, public safety, trade, tourism, and special interest topics. Study stakeholders were selected from organizations directly impacted by the performance of the region's transportation system, including shippers, receivers, and freight carriers across all freight modes. The stakeholder group included local governmental officials, regional advisory councils, chambers of commerce, development authorities and individual citizens.

In addition to the stakeholder meetings, GDOT staff and consultant team members participated in Georgia Rural Development Council (GRDC) meetings throughout the region to provide information and gain public input concerning the study. Interviews were conducted with shippers and receivers and economic development officials throughout the region. Study information was disseminated through study newsletters distributed at the completion of each study phase and a website, which ensured the availability of regular project updates and information. Each newsletter provided study information and status reports, opportunities for direct public participation, and key project contacts and sources for additional information. The availability of regular project updates and information was further ensured through the use of GDOT's website, which posted newsletters, presentations, maps, and contact information.

### Outreach Activities

Study kick-off meetings were held in Montezuma, McRae, and Statesboro during October 2000 to inform stakeholders about the study. The meeting included a listening session regarding local and regional transportation issues.

The study team interviewed major users of the freight transportation system during Phase 1. These industries were identified through Info USA, Transearch commodity flow data, Transportation Technical Services, Georgia Department of Labor's Area Labor Profiles, and GDOT's Chatham County Intermodal Freight Study. The identification process resulted in approximately 250 candidates, providing relatively even coverage of the study area in terms of geography and industrial makeup.



## Central Georgia HPC 6 Corridor Management Plan

Additional outreach activities in Phase 1 included the following presentations:

- Georgia DOT Project Status Meeting; December 20, 2000; Atlanta, GA
- Georgia DOT Board Presentation; February 2001; Atlanta, GA
- Government Staff Outreach Meetings; February 2001; Americus, Brunswick, Columbus, Macon, McRae, and Statesboro, GA
- Regional Advisory Council Presentation; March 2001; Americus, GA
- Georgia Rural Development Council; mid 2001

Five stakeholder meetings were held in August 2001 in Americus, Columbus, Macon, McRae, and Savannah to present study findings at the end of the first study phase.

Six stakeholder meetings were conducted in May 2002 in Americus, Columbus, Dublin, Macon, Savannah, and Vidalia. Following a presentation of progress and findings to date, stakeholders were divided into small groups to review and comment on the potential system deficiencies. Stakeholders also reviewed existing transportation programs that address system deficiencies.

The final round of stakeholder meetings were held in Americus, Columbus, Dublin, Macon, Savannah, and Vidalia in December 2002 to review findings from Phase 2 and present the Phase 3 recommended projects. The study team received many comments and questions regarding the recommended projects. These comments were addressed by the study team and incorporated into the final plan.

### Stakeholder Input

As a result of the extensive public outreach, significant input was received throughout the study. Congestion in small downtown areas was often noted. In some cases, stakeholders suggested constructing bypass routes around the towns while in other cases they asked that Intelligent Transportation System (ITS) technology involving the use of changeable message signs and cameras to improve traffic flow be considered. Signage deficiencies were noted, as well as recommended locations for turn lanes, acceleration lanes, and deceleration lanes. Safety was a prime concern at all of the meetings, with stakeholders pointing out deficient intersections and roadway conditions. At-grade intersections with railroad crossings were a primary concern to the stakeholders due to the delays experienced.

Stakeholders indicated locations of perceived congestion within their regions. In many areas with perceived congestion, stakeholders expressed the need for passing lanes, as noted in the Phase 2 Report Appendix. In many of these areas, volume to capacity (v/c) ratios or accident rate criterion did not reflect the need for additional through lanes. Interstate interchanges with safety and/or operational needs were noted, along with improvements for military transport within the corridor. Economic development



## Central Georgia HPC 6 Corridor Management Plan

roadways were also mentioned in stakeholder meetings, and their completion is eagerly anticipated.

Those who were contacted and interviewed were candid in their responses. Their opinions and recommendations varied regarding the strengths and weaknesses of the freight transportation network within Georgia and within the study area specifically. The interview sample produced a fairly comprehensive set of problem areas and recommended strategies to be assessed as part of the overall study effort. It is perceived that central Georgia possesses many incentives available to businesses for relocation and that continuing to encourage businesses to locate within the corridor area is vital to the economic health of central Georgia. Transportation system improvements to the HPC 6 Corridor are viewed as crucial to accomplishing this goal.

### Environmental Justice

Federal guidelines require that environmental justice principles be incorporated into transportation planning processes and products. These principles actively ensure nondiscrimination and prevent negative environmental impacts to low income and minority populations in federally funded activities. Social, racial, and economic parameters were discussed for each county in the 45-county study area and environmental justice communities were noted in the area of identified transportation deficiencies. Environmental documentation fieldwork for the development of projects was performed with environmental justice communities denoted on project location and environmental resource maps.

As a result of the corridor study, the study team found that projects identified to address transportation deficiencies will not disproportionately burden environmental justice communities. Specific information on the location of potential environmental justice communities is noted in the Project Worksheets (Appendix A). This information will be important in later, more detailed studies to develop facilities in a manner that does not disproportionately impact environmental justice communities in adverse ways while providing them the benefit of an improved HPC 6 transportation facility.

### **Plan Development**

The HPC 6 Corridor Management Plan resulted from a comprehensive process of identifying the central Georgia transportation network, examining transportation system deficiencies, and defining solutions to address deficiencies. The study process adhered to a deliberate course of evaluation designed to identify and address those deficiencies most crucial to freight movement and the economic development of central Georgia. The plan outlines the steps taken to arrive at a package of projects supportive of enhanced freight movement throughout the region as well as those most competitive for NCPD funding. A need and purpose statement was developed for each project to provide GDOT with a competitive package of NCPD projects for use by the Georgia Congressional delegation in obtaining funds for HPC 6.



### 2 Corridor and Transportation System Evaluation

Central Georgia Corridor Study work plan activities focused on setting the groundwork for development of the HPC 6 Corridor Management Plan. The first phase of the study determined current status of the corridor's economy, identified industry clusters, and estimated the dependence of industries on freight transportation infrastructure. During the second phase, current and future system deficiencies were identified based on system characteristics, including traffic volumes, truck percentages, roadway capacities, and accident experience. This information, briefly reviewed below, was vital to development of the transportation demand modeling and identification of projects to improve freight movement during the third study phase.

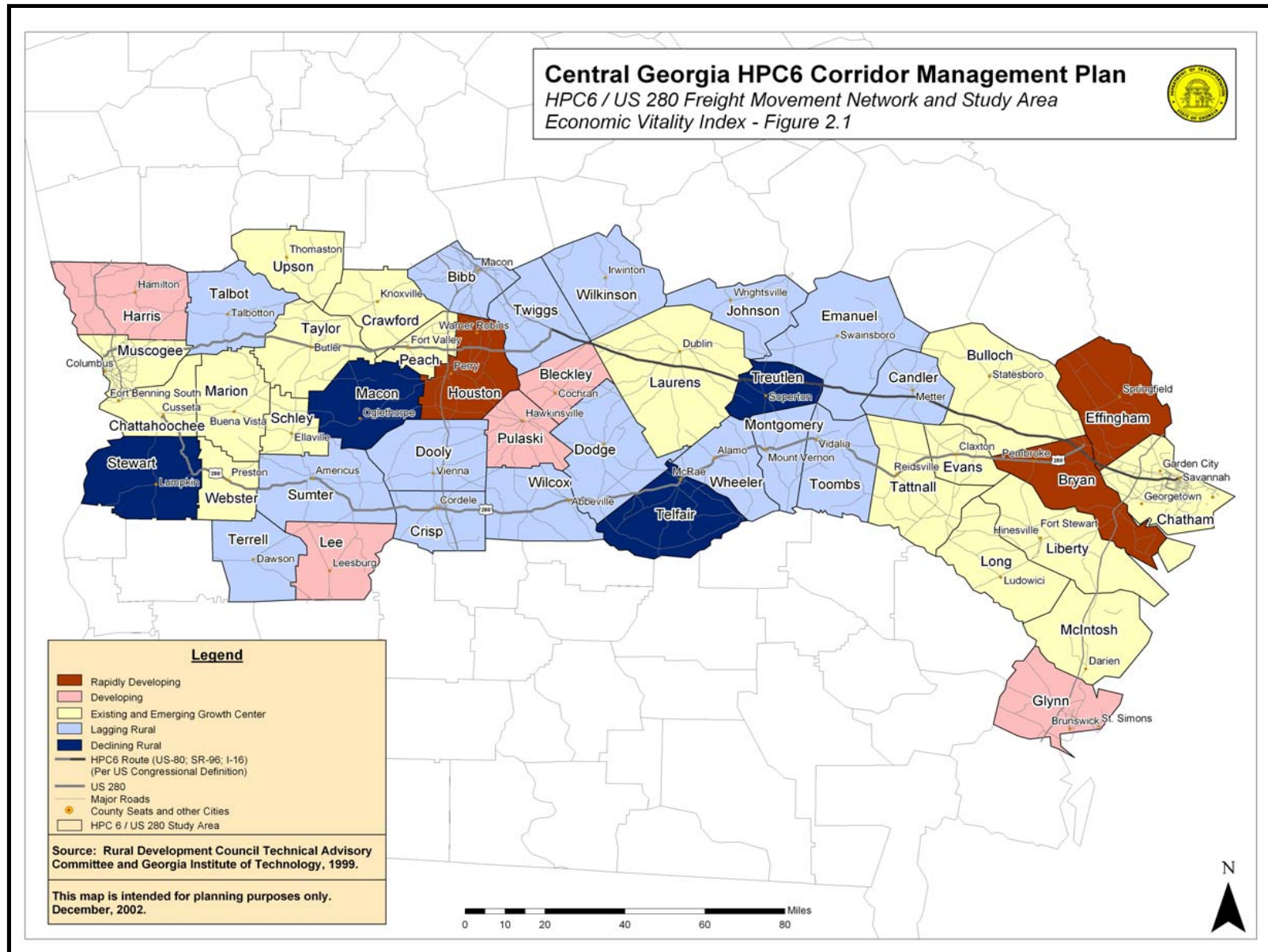
#### Corridor Evaluation

The Central Georgia Corridor is characterized by a diverse population with low income, high poverty, and high unemployment. Two initiatives were undertaken in 2000 to address economic and transportation conditions in Georgia. The Georgia Rural Development Council (GRDC), together with the Georgia Institute of Technology, developed *The State of Rural Georgia Report*, while the University of Georgia's Carl Vinson Institute prepared *The Power Alley Initiative: An Assessment of the Economic Development Potential of State Infrastructure Investment in South Georgia*. Both studies identified that one key factor to sustain community growth is to maximize investment return through transportation infrastructure improvement. The studies also determined that additional investments in communication infrastructure, housing availability, or other economic investments, as opposed to transportation infrastructure alone, are often key to overall sustained community growth. Along with capital investments, strong and active leadership were also recommended for successful community development.

The GRDC's Economic Vitality Index is useful in identifying counties in one of five categories: Rapidly Developing, Developing, Existing and Emerging Growth Center, Lagging Rural, or Declining Rural. Counties in Georgia have been assigned based on factors including per capita income, unemployment, bank deposits per 1,000 persons, labor force participation rate, average manufacturing weekly wages, annual growth in total population, and percentage of persons living below the poverty line. Twenty-five of the 45 counties in the study area are classified as Rapidly Developing, Developing, or Existing and Emerging Growth Centers. The GRDC found these designations as representative of the potential to stimulate growth. The GRDC encourages investment in the corridor, and the *Power Alley Initiative* recommended focused investment in these 25 counties to create a "corridor of essential infrastructure" between Columbus and Savannah. The GRDC's final classification of counties was made after publication of the Central Georgia Corridor Study Phase 1 report and the revised statistics are reflected in Figure 2.1.



Figure 2.1: Economic Vitality Index







## Central Georgia HPC 6 Corridor Management Plan

Rapidly Developing counties are Houston, Effingham, and Bryan Counties, while Developing counties include Pulaski, Bleckley, Glynn, Harris, and Lee Counties. In addition, there are 17 counties classified as Existing and Emerging Growth Centers.

Building on the Economic Vitality Index, the ability of transportation infrastructure investment to promote community growth was analyzed using a Transportation Accessibility Index. The Transportation Accessibility Index reflects the accessibility of counties to Interstates, commercial airports, business airports of regional impact, intermodal terminals, multi-lane highways, and major rail carriers. Decisions about transportation investment can be better considered by examining both indexes together. A county with a good (growing or emerging) economy and poor transportation access would be an excellent candidate for transportation improvements. Conversely, a county with a poor economy and high access may not need additional transportation investments, but rather more focus on other economic or social issues constraining growth and development.

### Study Area Population and Employment

Population in the study area increased 19% between 1980 and 2000 (Figure 2.2), with a growth rate lower than the state or national average between 1980 and 1990. Between 1991 and 2000, the corridor population mirrored the United States as a whole but fell behind the rest of Georgia, which was the fastest growing state east of the Rocky Mountain region. The corridor's fastest growing counties are on the eastern side of the state: Effingham, Bryan, and Long Counties. Four of the eight Georgia counties experiencing declining population (Macon, Stewart, Treutlen, and Telfair Counties) are located in the corridor.

At \$21,823, the corridor's per capita income is significantly lower than the statewide average of \$25,839, and the national average of \$27,203. Per capita income and population are forecast to lag behind the national average over the next 25 years. Private, non-farm employment grew significantly more than the national average during the 1990-2000 decade. The largest job-generating industries were services, durable goods, manufacturing, and construction. Approximately one-third of the study area employment is in freight related industries (Figure 2.3). Despite the growth in jobs, unemployment rates were higher in the study corridor than national and state averages. The Metropolitan Statistical Areas of Columbus, Savannah, and Macon had lower unemployment rates than the corridor as a whole, but were still higher than national and statewide averages.





Figure 2.2: Study Area Population

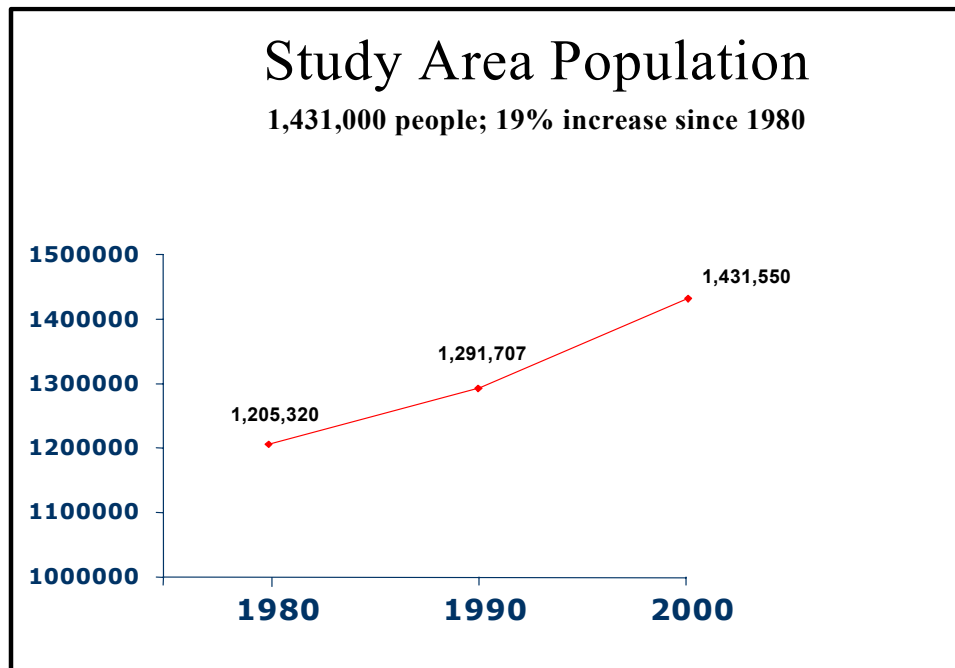
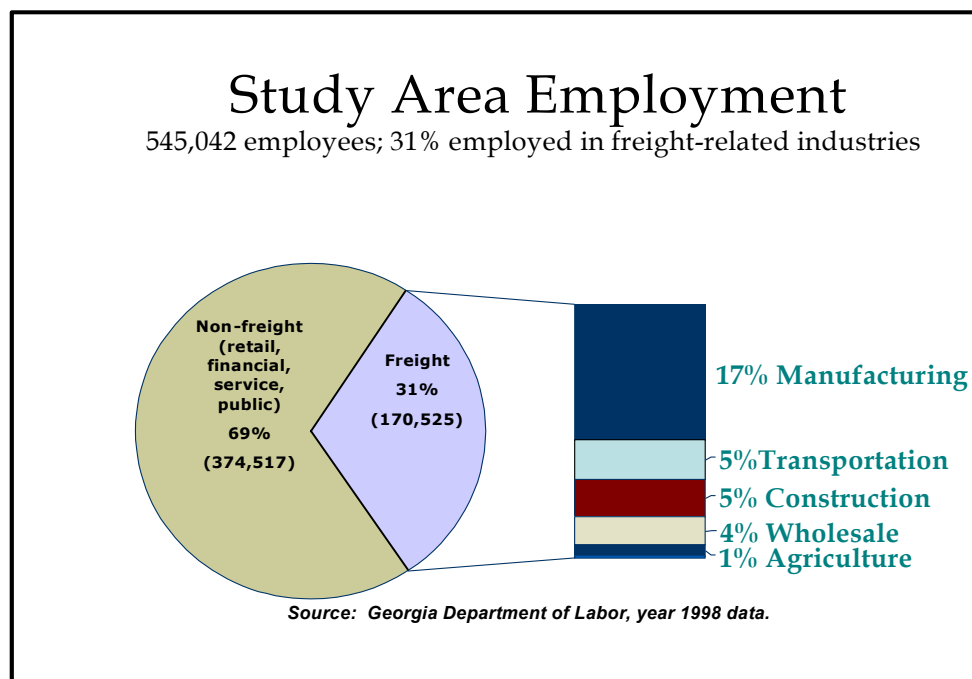


Figure 2.3: Study Area Employment



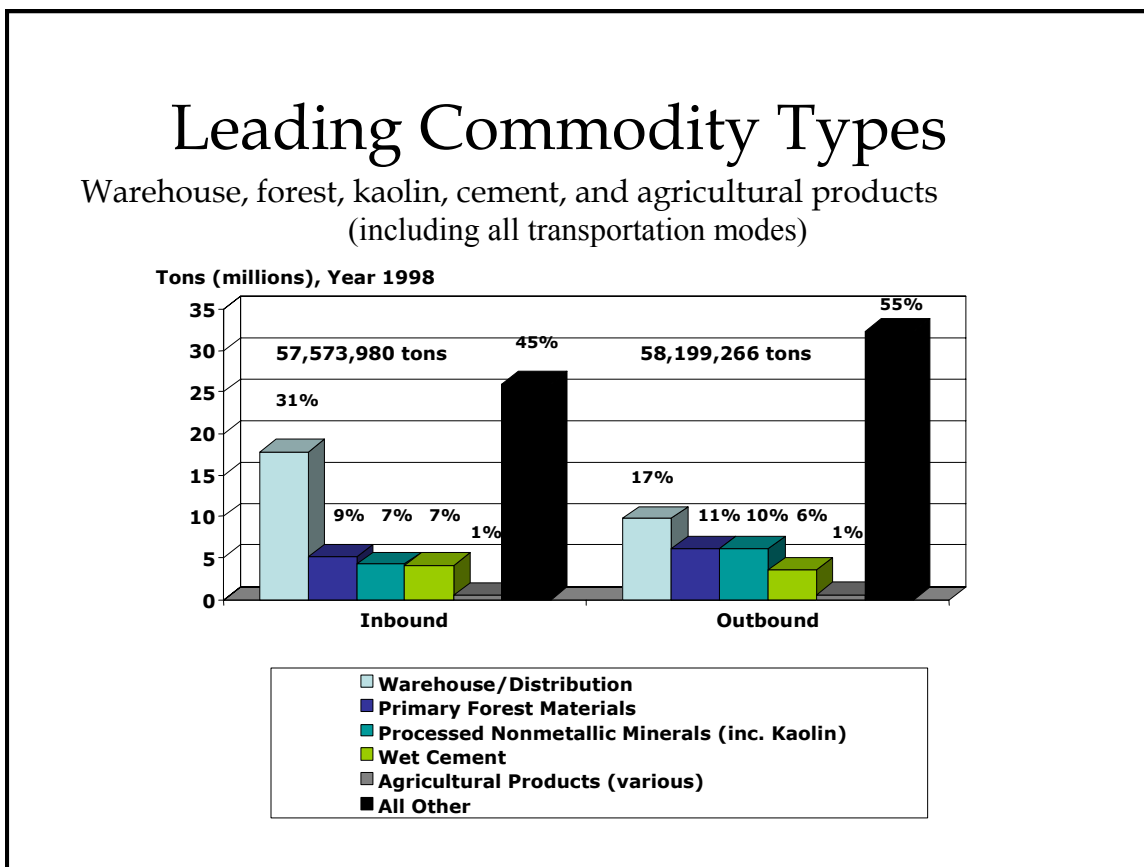


## Industry in the Corridor

Location quotients (LQ) and Shift Share Analysis help identify industry clusters in the corridor that use and are dependent upon freight transportation. LQ measure the concentration of particular industries in a region relative to the nation. The corridor's industry mix generally mirrors the national average except for high concentrations of government and non-durable manufacturing (textile products, food, apparel, and tobacco) and lower concentrations in mining, wholesale trade, finance, insurance, and real estate.

Shift Share Analysis measures the shift (movement) of the corridor's economy into faster or slower growth sectors. It also measures the corridor's share of growth in industrial sectors. Nationwide trends show that services, construction, transportation, retail, and agricultural industries are growing while manufacturing, mining, finances, farm employment, and government sector employments are in decline. Within the corridor, Shift Share Analysis shows services, retail, and agriculture, forestry, and fishing are growing faster than national trends. Current leading commodity types are shown in Figure 2.4.

**Figure 2.4: Leading Commodity Types**





## Central Georgia HPC 6 Corridor Management Plan

Growth at specific industry levels was identified to gain an understanding of which industries have a competitive advantage so that transportation investments can be strategically targeted, if desired. The industries with a competitive advantage in the corridor are: production of transportation equipment; agriculture; forestry; fishing; electric equipment; fabricated metals; stone; clay; glass and concrete; tobacco manufacturing; and machine, computer, printing, and primary metals manufacturing. Using LQ and Shift Share Analysis, the industry clusters that are judged key in the study corridor include transportation equipment, tobacco manufacturing, stone, clay, military bases, and food.

### Freight Demand and Commodity Flow Analysis

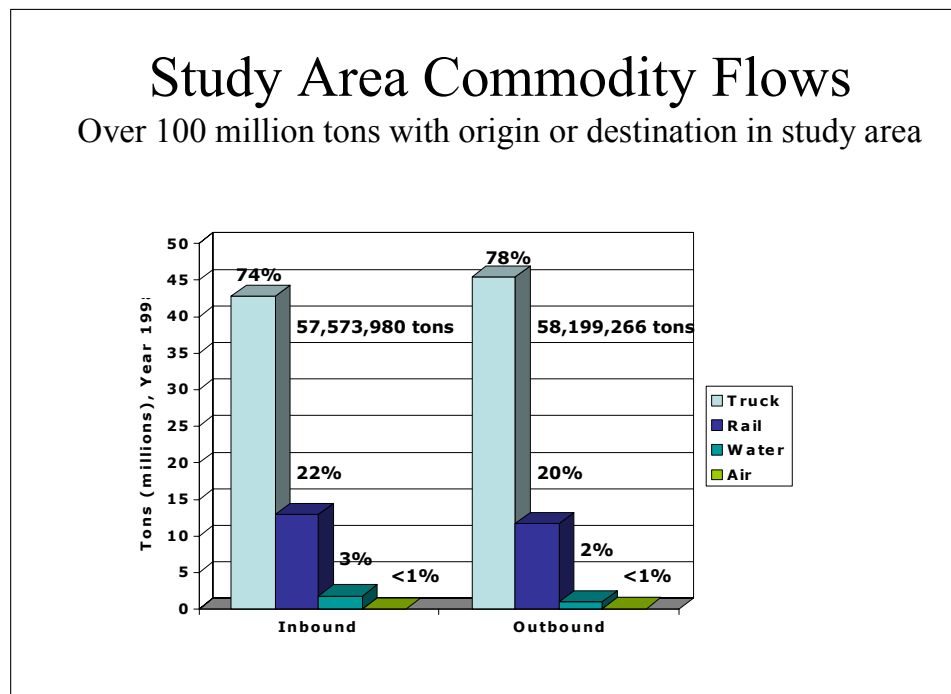
The freight transportation demand of key industries was computed, and the agriculture, forestry, food, and tobacco industries were determined to produce the highest demand. Other industries with high freight transportation demand include government, military, transportation, aerospace equipment, apparel textiles, floor coverings, basic materials, wood products, and paper products.

The economic vitality of the central Georgia region may be lagging, but the study area accommodates a considerable amount of freight traffic (Figure 2.5). Inbound and outbound domestic tonnage in the corridor totaled 122 million, at a worth of \$319 billion in 1998, with trucks accounting for 77% of the tonnage, rail 22% and water 1%. The corridor accounted for 7.5 million loaded truck trips and 550,000 loaded rail car trips. Through tonnage (tonnage that only passes through, not within, the corridor) totaled an additional 133 million. International commodity flow is handled by the Ports of Savannah and Brunswick. The Port of Savannah ranks 39<sup>th</sup> in the nation in total tonnage, 7<sup>th</sup> in container traffic, and 4<sup>th</sup> among US Atlantic ports in international tonnage. The Port of Brunswick is ranked 112<sup>th</sup> in the nation with regard to total port tonnage. The Port of Columbus processes 175,000 tons of domestic commodities annually.

A comprehensive list of major freight transportation users in the corridor was developed from various national and local sources. A sampling of 76 shippers/receivers and carriers was interviewed, with their locations mapped to show the geographic dispersion represented. Those interviewed discussed transportation problems, potential solutions, and their thoughts on the climate in their business. They generally agreed that business attraction efforts, including transportation infrastructure investment, are essential to the economic health of central Georgia.



Figure 2.5: Study Area Commodity Flows



### Intermodal Transportation System Evaluation

The primary goal of the Central Georgia Corridor Study was to determine physical and operational constraints to freight movement, as well as any constraints in the overall reliability of the transportation system. To this end, information on current and future traffic conditions through the corridor was identified and analyzed.

Highway travel demand model data was used to supplement existing traffic forecasts in the corridor. Commodity flow and economic profile data were used to construct baseline traffic estimates for the highway and rail systems, with demographic data used to establish background (non-freight) highway traffic in areas where traffic demand forecasts do not exist. Ultimately, this information was used to develop current and forecast freight flows for the study area.

To facilitate the use of traffic projections in the alternatives analysis, a methodology for assessing potential changes in mode share (truck versus rail versus water) was defined. A roadway network planning tool was created to quantitatively test the impacts of transportation infrastructure improvement alternatives on the highway network. The tool is a computer model that can simulate the re-routing of truck trips in response to new roads, bypasses, faster speeds, widenings, and other changes to design and capacity.



### Traffic Projections

The baseline for daily freight traffic was established by linking the 1998 Transearch commodity flow information with average truck payload factors (to convert freight tonnage to number of trucks). Transearch commodity flow information provides annual tonnage organized by two-digit Standard Transportation Commodity Classification (STCC2) commodity level and average truck payload factors. The information, derived from the Georgia subset of the national Vehicle Inventory and Usage Survey (VIUS) database, provides estimates of truck load by commodity and distance class. Once annual truck equivalents were derived, they were converted into daily truck equivalents. Developing 2025 estimates then required projecting the 1998 daily truck equivalent data according to growth factors developed through the Regional Economics Modeling, Inc. (REMI) modeling process. REMI is an input-output type of modeling procedure based on predefined REMI product classes. Figures 2.6 and 2.7 depict current and future total daily truck trips in the corridor.

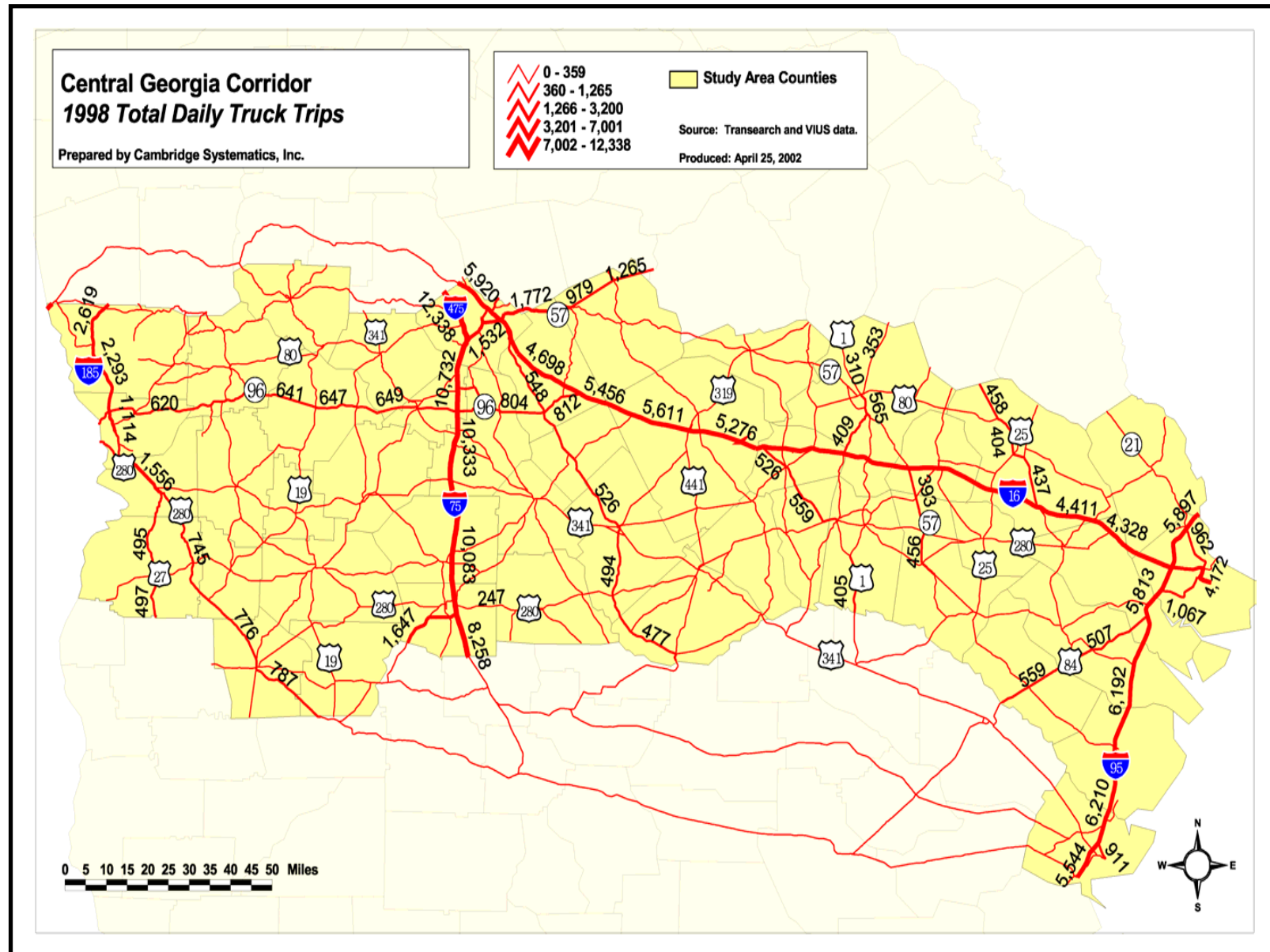
The non-freight Annual Average Daily Traffic (AADT) for each section of the highway was developed from existing GDOT information, specifically the 1998 Highway Performance Monitoring System (HPMS) data file. The forecast of the 2025 non-freight AADT employed a 1.9% growth rate, in accordance with the estimation methodology used for the Statewide Transportation Plan. Figures 2.8 and 2.9 depict existing and 2025 forecast non-freight AADT data. Current and future freight and non-freight AADT were used to calculate volume to capacity (v/c) ratios, which were subsequently mapped on the corridor highway network (Figure 2.10). These maps show current concentrations of high v/c, primarily in and around the three major metropolitan areas in the corridor (Columbus, Macon, and Savannah). Future level of service deterioration indicated by the higher v/c ratios is expected on much of I-75 and I-95, as well as some segments of routes near smaller activity centers.

### Programmed Improvements

Seven GRIP routes traverse the study area. Implementation of the GRIP system (Figure 2.11) will upgrade numerous mainline and connecting roads in the Central Georgia HPC 6 Corridor. GDOT's Construction Work Program (CWP, April 2002 edition) identified 541 projects, from all state and federal funding programs, within the Central Georgia Corridor Study area (Figure 2.12). Projects identified in the CWP address crucial transportation needs, and many will eliminate deficiencies throughout the Central Georgia Corridor Study area. Approximately 50% of the programmed projects in the study area are either road widening or bridge projects, with resurfacing and maintenance projects comprising 10% and railroad crossing upgrades providing 5% of programmed projects. Implementation of Intelligent Transportation System (ITS) projects in Columbus, Macon, and Savannah, and weather monitoring systems in Glynn County, will also allow trucks to operate more efficiently.



Figure 2.6: 1998 Total Daily Truck Trips





**Figure 2.7: 2025 Total Daily Truck Trips**







Figure 2.8: 1998 Non Freight AADT

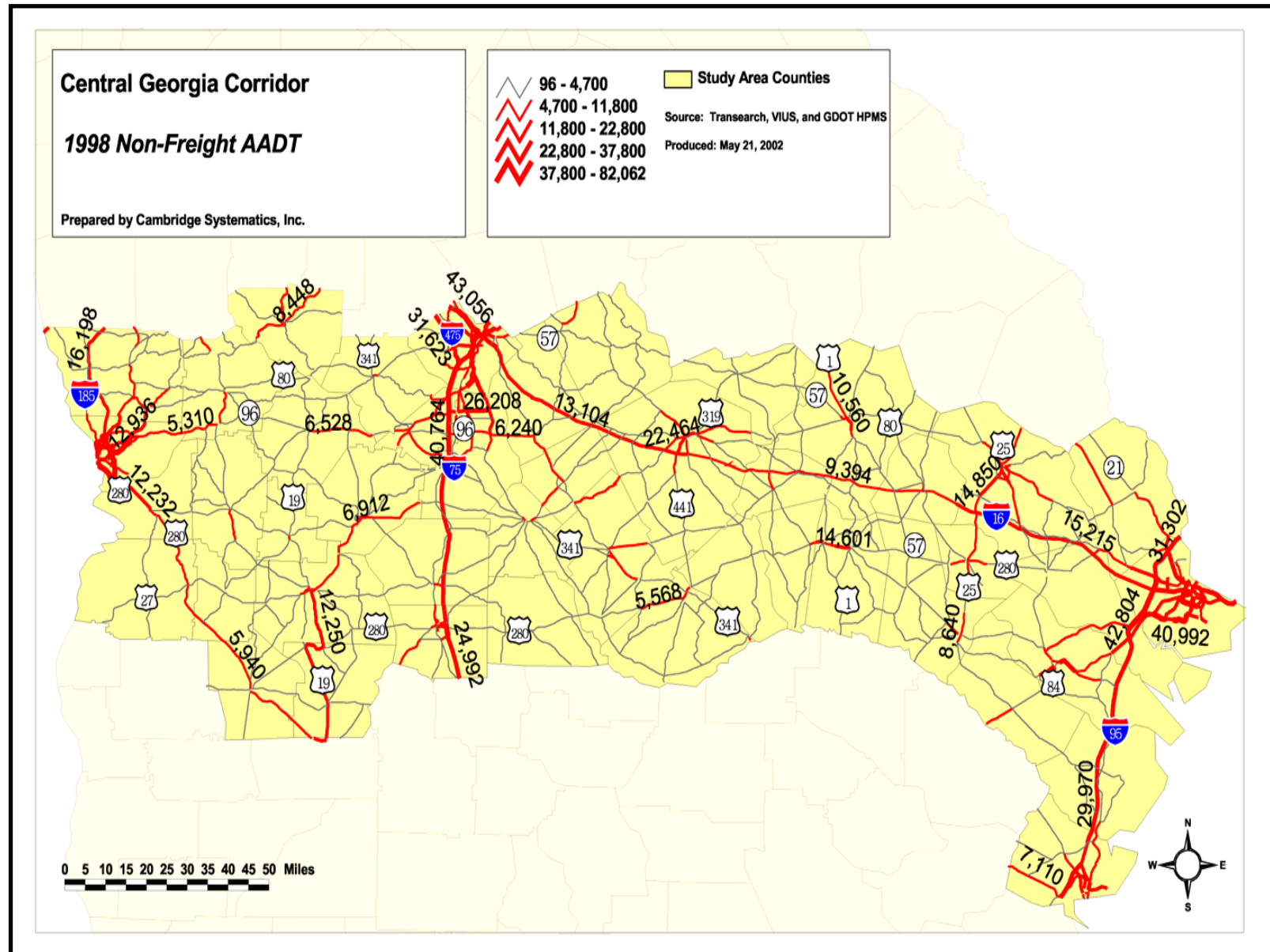






Figure 2.9: 2025 Non Freight AADT

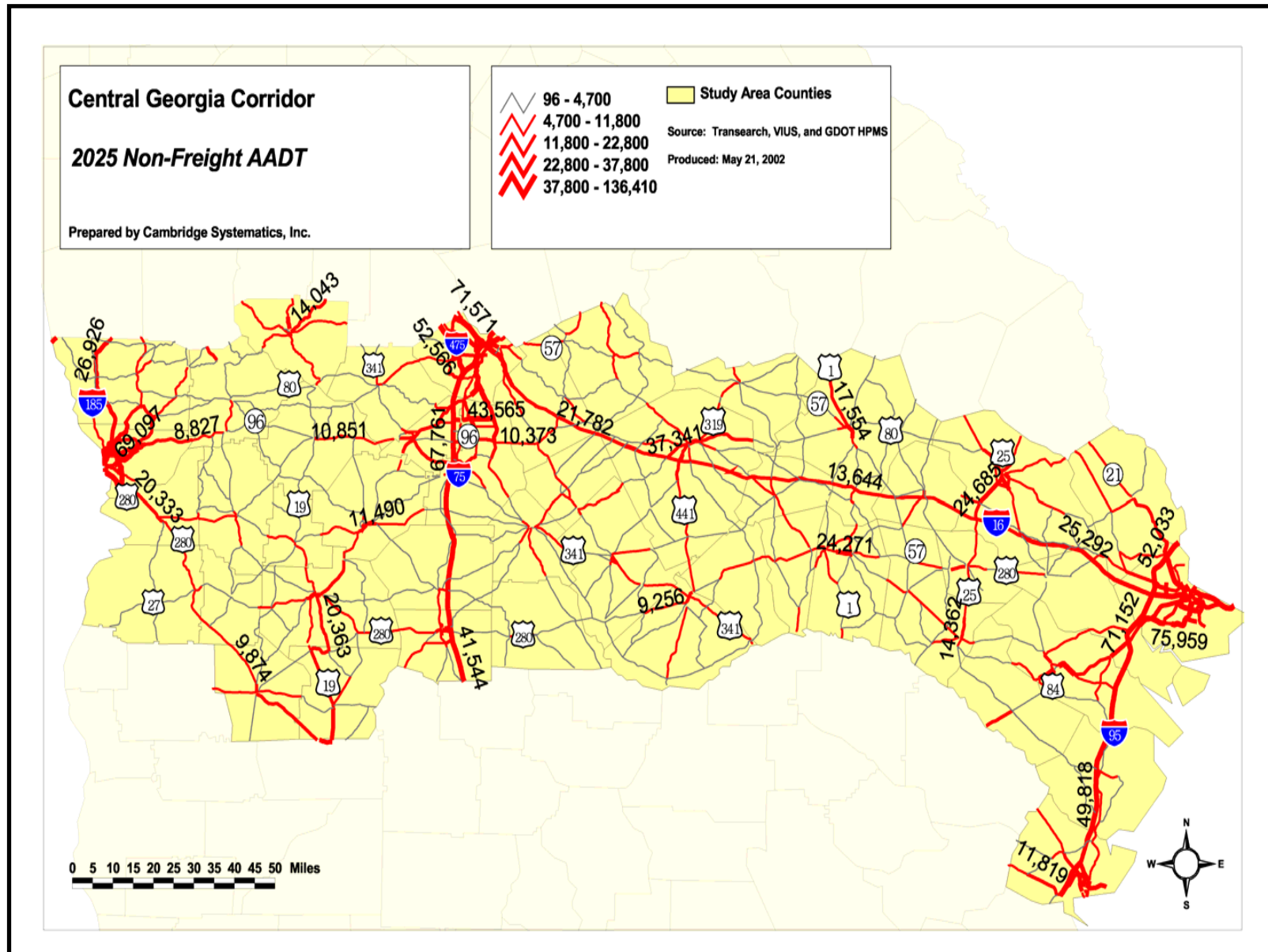




Figure 2.10: 1998 and 2025 Volume to Capacity

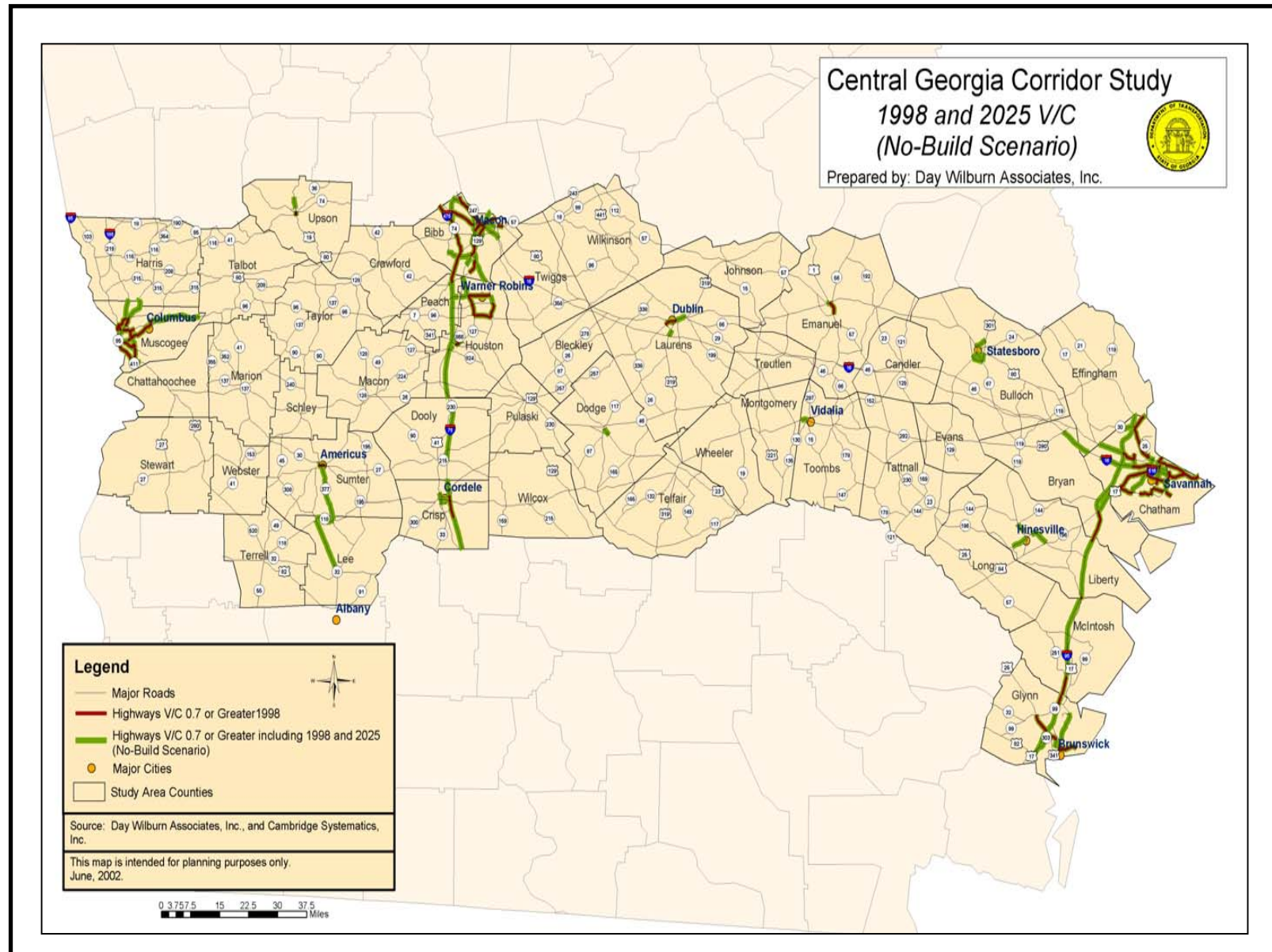




Figure 2.11: Governor's Road Improvement Program

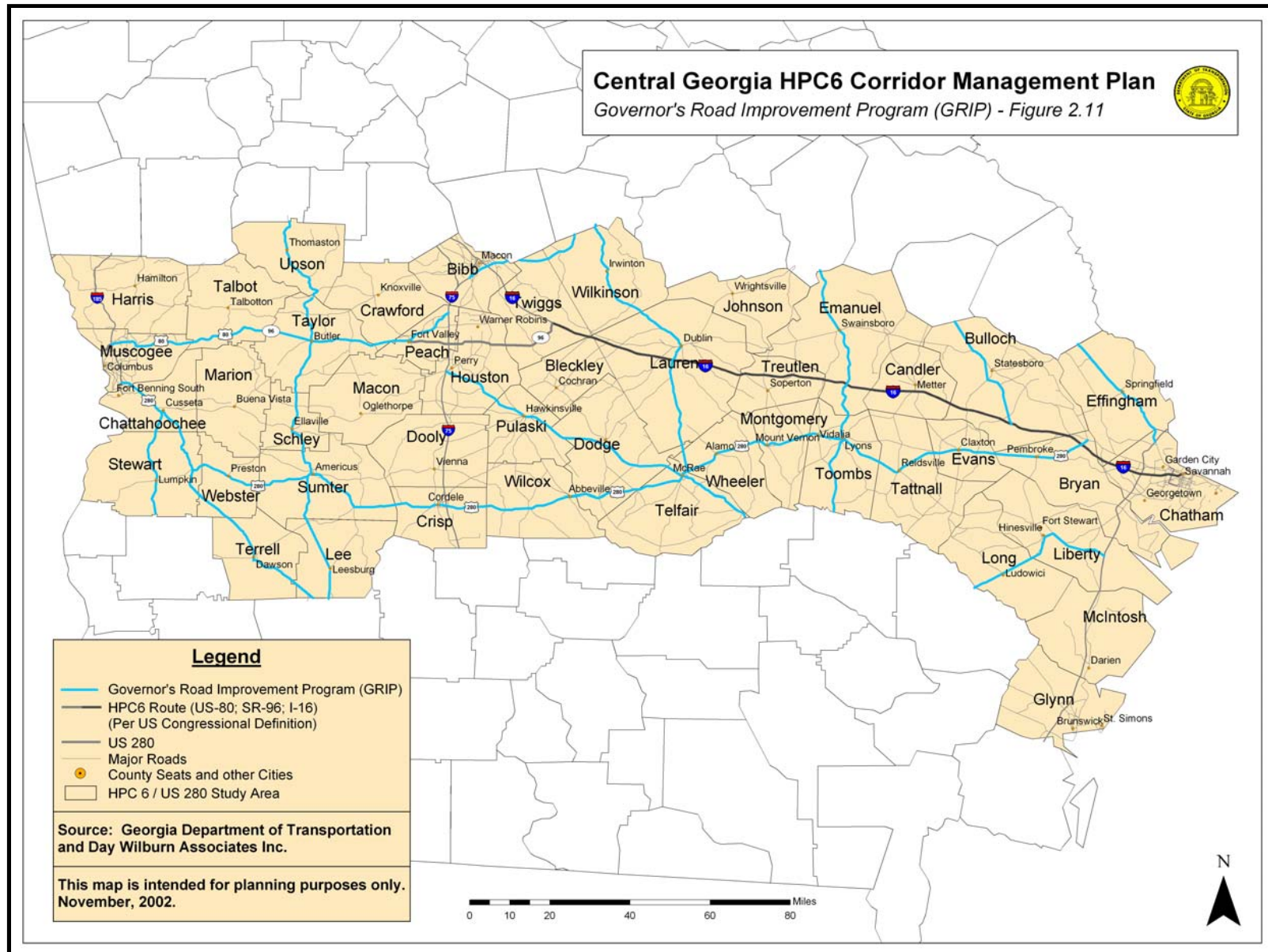
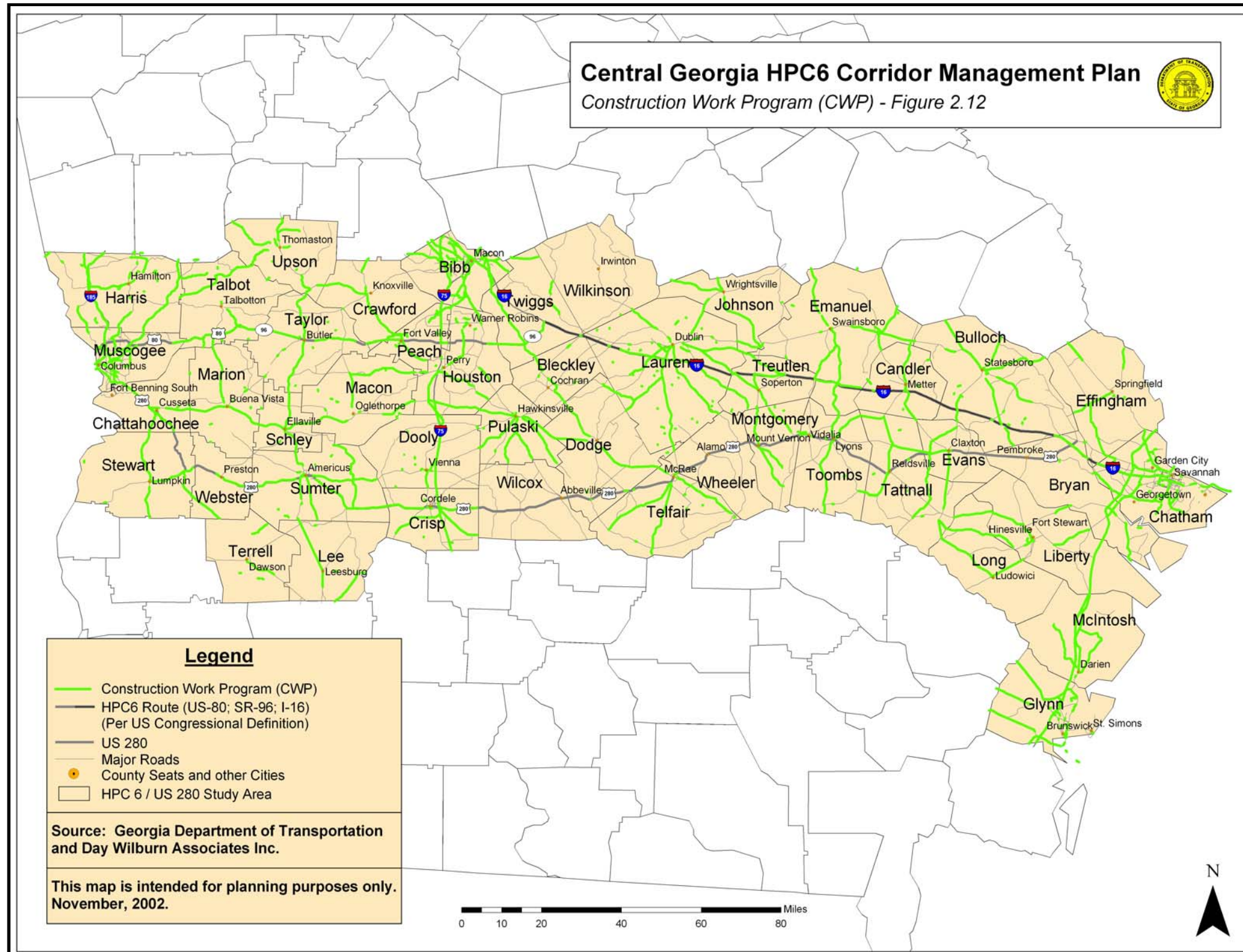






Figure 2.12: Construction Work Program





### Railroad Improvements

The Central Georgia Corridor Study also addressed the need for rail improvements. The Phase 2 report discussed the importance of rail service for Georgia's industrial shippers and identified two major types of improvements: the elimination of at-grade rail/highway grade crossings in urban areas and the provision of short-line railroad improvements. The roadway network planning tool, which is designed specifically to address highway-related improvements, can be used to assess the elimination of at-grade rail/highway grade crossings, while other types of rail improvements can be assessed qualitatively. Expected improved travel speeds due to proposed railroad grade separations on the HPC 6 mainline (SR 96) were entered into the tool to assess the benefits. Railroad at-grade crossings on the HPC 6 mainline and connecting roads are shown in Figure 2.13.

### Implications for GDOT Maintenance Program

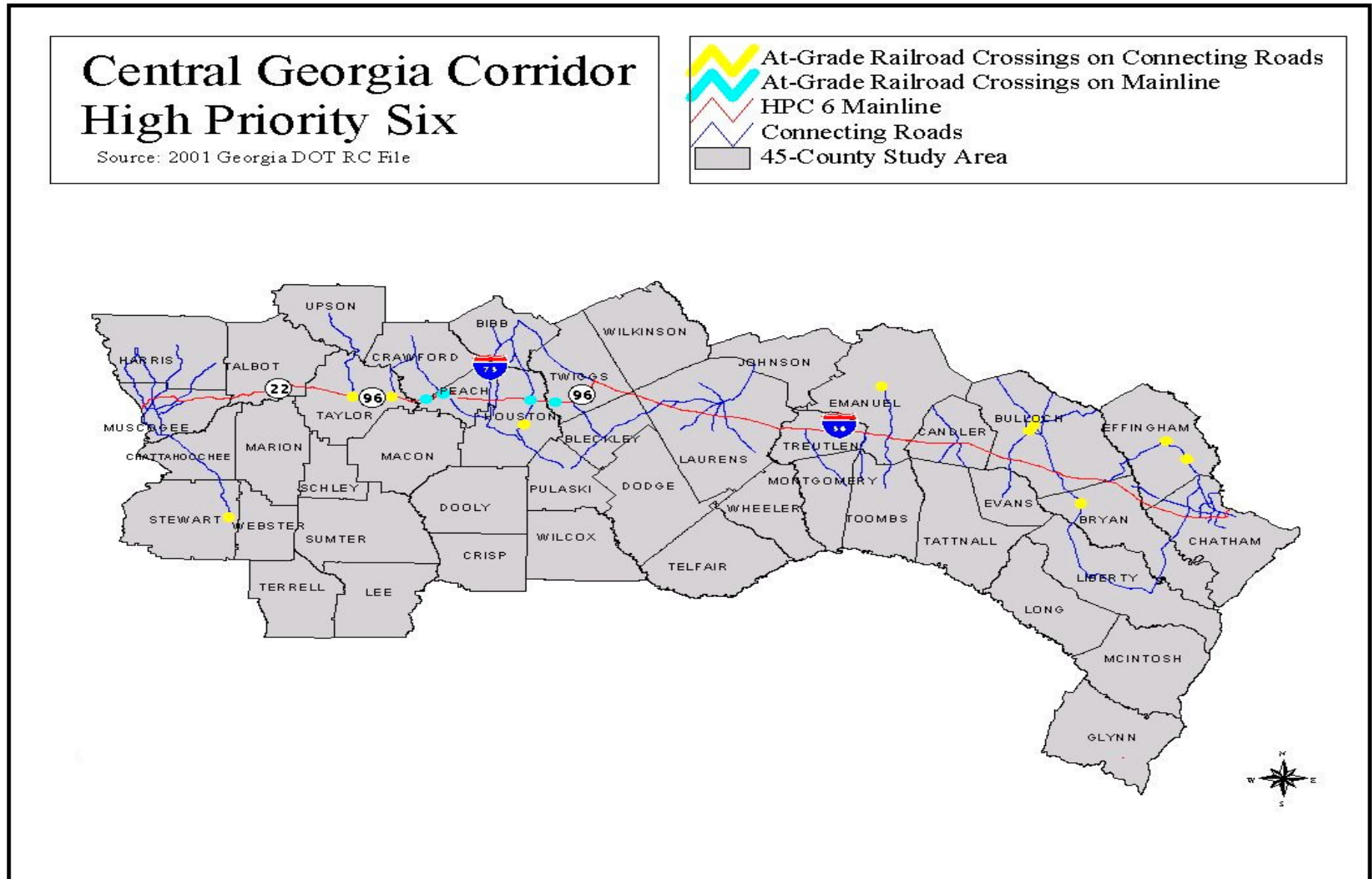
Many identified deficiencies fall into the category of recommended best practices for future construction or rehabilitation of existing intersections, roadways or bridges. Improvements such as shoulder widenings (including the inside shoulders of Interstates), bridge replacements, intersection resurfacing, railroad crossing grade separations, passing lanes, and white topping were included. Such deficiencies, considered programmatic, were provided in the appendices of the Phase 2 document.

Several maintenance and design best practices were developed for analyzing roadways along the HPC 6 mainline and connecting road system. Best practices for areas with high truck movements may be utilized in two ways: as a guide for future construction and to determine where the existing transportation system might be improved. Some examples of maintenance and design best practices include:

- Wide outside shoulders (10 ft. minimum, 12 ft. desirable)
- Full depth shoulders
- Portland cement concrete (PCC) or white topping for non-Interstate mainline
- Concrete pavement or white topping on interchange ramps and intersections
- Increased use of grade separations and interchanges on freight routes if determined to be beneficial by GDOT's highway safety program and volumes and train frequencies warrant separation
- Increased safety at interchanges
- Replacement of bridges with a sufficiency rating of 60 or below
- Design of bridges for HS-20 design loading or greater
- Smoothing bridge ends to decrease dynamic loads on pavement
- Replacement/discontinuance of steel or continuous steel bridge structures
- Bridges with a vertical clearance of at least 17 ft.
- HPC 6 mainline grade separations at all railroad grade crossings



Figure 2.13: At Grade Railroad Crossings on Connecting Roads





## Central Georgia HPC 6 Corridor Management Plan

Considering the implications of additional freight in the Central Georgia Corridor, the GDOT maintenance program will continue to evaluate and implement roadway maintenance technologies to prolong the life of the roadway network.

### Summary of Key Findings

Numerous studies have recommended action to reverse the lagging or declining economic conditions prevalent in many rural counties in central Georgia. Below national and state averages for population and economic growth, per capita income, unemployment and poverty, the corridor struggles to identify and implement action to encourage economic development. Detailed data collection (including source data from interviews with shippers/receivers and carriers), combined with a thorough analysis of commodity flows and transportation infrastructure, offered a baseline from which an investment strategy could be developed.

Transportation deficiencies may be adversely affecting the economic vitality of Central Georgia Corridor counties. Industry clusters with distinct and measurable competitive advantages were identified and those dependent on freight transportation infrastructure could benefit from targeted improvements. While hundreds of operations, infrastructure, and maintenance deficiencies were identified during the course of this study, most will be solved by implementation of existing state transportation programs. To address transportation deficiencies that are not solved through existing programs, potential improvements and funding sources were identified and assessed under Phase 3 of the HPC 6 Corridor Study.



### 3 Development, Evaluation, and Selection of Recommended Improvements

The Central Georgia Corridor Study addressed transportation needs on HPC 6 from the Georgia coast on the east to Columbus at the Alabama state line. The study involved a thorough evaluation of freight transportation, commodity movement, and economic development along the HPC 6 mainline (US 80, SR 96, and I-16) and surrounding roadway network.

A program of projects was developed to satisfy future demands on HPC 6 and the surrounding roadway network. Identified system deficiencies were examined to determine routes with a freight focus that have congestion and/or safety deficient locations. Improvements were identified for each deficient location that did not already have a project programmed. In addition to exploring roadway widening or new construction projects, application of ITS technology was evaluated at the deficient areas. Preliminary environmental reconnaissance was also conducted to identify any environmental constraints that could affect implementation of future projects. The potential benefit of implementing identified projects was tested using the roadway network planning tool and ITS Deployment Analysis System (IDAS) software. Identified projects are expected to facilitate truck operations by eliminating bottlenecks and improving connectivity, thus enhancing a competitive economic advantage for trucks operating in the corridor.

#### Overview of the Approach/Methodology

Transportation system deficiencies were identified through many different methods. Technical data from the HPMS and Road Characteristics Inventory (RCI) databases were evaluated. Interviews with stakeholders, including Regional Development Center staff, economic development organization members, and GDOT staff, were conducted to identify deficient locations. Project team members also conducted field visits to observe and identify deficiencies.

#### Deficiency Screening

Identified deficiencies were screened to determine those with a freight focus and congestion or safety-based need for improvement. Figure 3.1 illustrates the deficiency screening process. The first screen identified all routes in the study area that were freight-focused by virtue of being on the Strategic Highway Network System (STRAHNET)<sup>1</sup>. Deficiencies located on the STRAHNET are considered to be freight-focused. Because roadways in the 45-county study area average 8-8.5% truck traffic, routes not on the STRAHNET with truck traffic percentages above this threshold were also considered to have a freight focus.

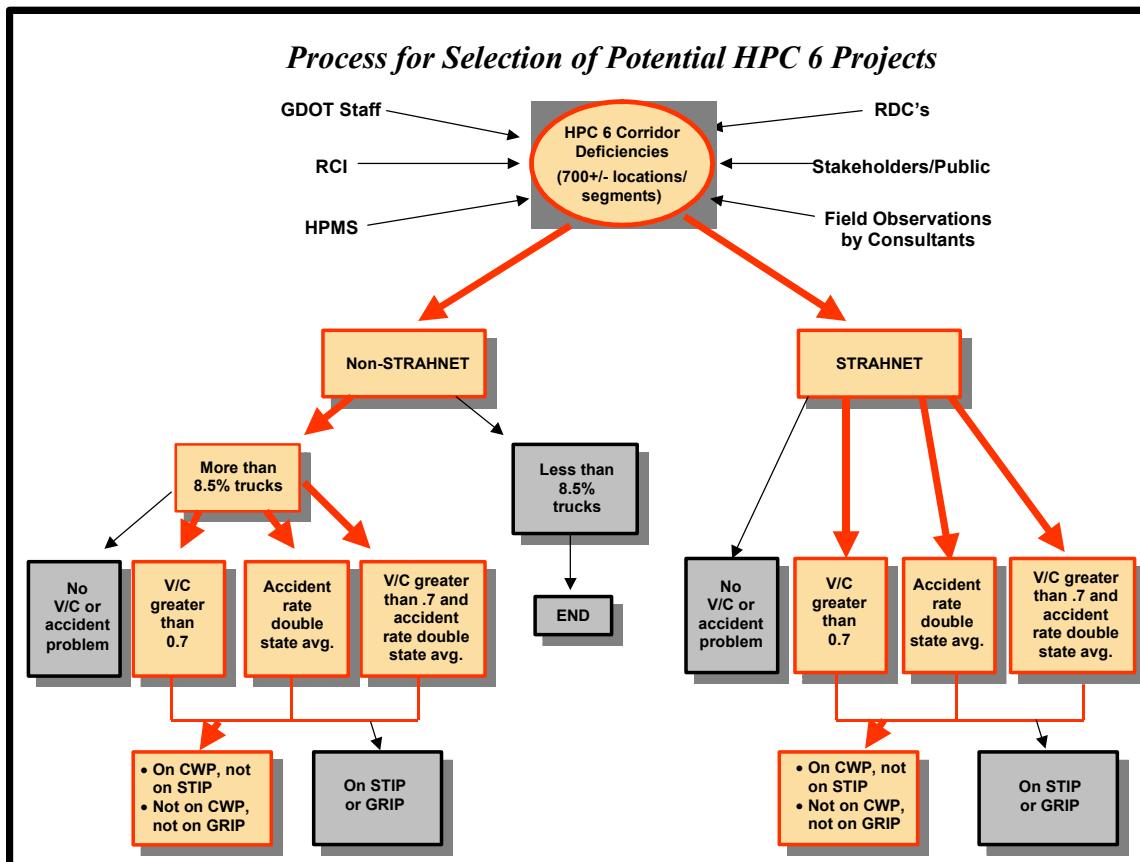
---

<sup>1</sup> STRAHNET is a system of public highways that provides access, continuity, and emergency transportation of personnel and equipment in times of peace and war.





Figure 3.1: Deficiency Screening Process



The next screen for deficiencies considered congestion or safety problem areas. A volume to capacity (v/c) ratio of 0.7 or greater was used as the threshold for identifying present and future deficient locations. This threshold is lower than that used for urbanized areas (usually 0.8 to 1.0) because congestion in less populated areas is felt more keenly at lower levels and is less expected. Locations with safety-related deficiencies have accident rates equal to or greater than double the statewide average. By utilizing this standard, the deficiency list focused on locations with the more serious safety needs.

The final screen determined which deficient locations have a project programmed in the STIP<sup>2</sup> or are included in the GRIP<sup>3</sup>. Deficient locations with projects included in either of these programs were considered to already have a solution identified and were removed from the process.

<sup>2</sup> The STIP is an annual, financially constrained list of projects programmed by GDOT for the next three years. Funding has been identified and secured for all projects listed in the three-year STIP.

<sup>3</sup> The GRIP program was designed to ensure that 98% of all areas in Georgia would be within 20 miles of a four-lane road.



## Central Georgia HPC 6 Corridor Management Plan

After the multi-level screening, 34 deficient locations remained. A five-page Project Worksheet was developed to compile information for further evaluation. The worksheet includes the following information for each:

- Deficiency/need and purpose
- Location map
- Recommendation description (roadway and ITS)
- Photograph
- Design and construction issues (from field observations)
- Environmental issues
- Roadway typical section
- Costs

### Engineering Evaluation

A team of transportation engineers conducted a field examination of each of the deficient locations, which included taking photographs and gathering maps to define the existing roadway conditions. In some cases, the RCI file, existing plans, and tax maps were used to help define the conditions. GDOT District Right-of-Way Engineers were interviewed to obtain right-of-way costs for similar projects. Field observations confirmed existing conditions for the following:

- Typical section
- Shoulders
- Design speed
- Observed substandard design features
- Observed safety concerns
- Maintenance
- Drainage
- Pavement
- Signals
- Signing and marking
- ITS opportunities
- Bridges
- Other major structures
- Access control
- Right-of-way
- Observed utility issues
- Railroads
- Constructability issues
  - Erosion control
  - Staging
  - Traffic control



## Central Georgia HPC 6 Corridor Management Plan

Roadway project cost estimates were based on published GDOT per mile costs for various improvement types. These figures exclude costs for intersections/interchanges/structures over 20 feet, right-of-way, landscaping, traffic signals, preliminary engineering, and construction engineering inspection. The costs for these items were estimated separately. An additional 10% was added to the construction cost estimate to budget for construction engineering inspection.

Preliminary engineering includes the cost of preparing the concept, environmental documentation, design plans and right-of-way plans. Generally, the concept is 1% of the construction cost, with the environmental document also budgeted at 1% of the construction cost. Design plans and right-of-way plans generally cost 8-12% of the estimated construction cost, depending on the level of difficulty. Bridge design is often allocated at a higher percentage of the construction cost. Very small projects, such as intersection improvements, may also involve a higher percentage of the construction cost for design.

The cost of utility relocation is usually 2-10% of the roadway construction cost, depending on the anticipated level of involvement, and is usually a local cost included in a Local Government Project Agreement. Urban projects generally involve a higher percentage than rural projects. Field observations included identification of surface evident utilities on bridges, along the roadway, and crossing the roadway. In some cases, surface evidence of water lines along a road can be identified. Local directors of public works or city engineers will need to identify more specific information about utilities for each project during future project design and implementation phases.

### Environmental Evaluation

Preliminary environmental reconnaissance was conducted at deficient locations to identify environmental constraints that could affect implementation of future improvements. Constraints included sensitive ecological resources (wetlands and other jurisdictional waters of the United States and federally protected threatened and endangered species), historic structures, sensitive land uses (churches, schools, parks, community facilities, and cemeteries), and possible environmental justice communities. Field surveys were conducted in September through November 2002, with environmental specialists identifying environmental constraints on location maps and worksheet pages. Federal permits that may be required to implement roadway improvements (such as widenings) were also identified with the probable level of environmental documentation required for each project corridor noted. Summary tables of environmental constraints, possible permit requirements, and level of additional environmental documentation are included in the Project Worksheets in Appendix A.

A trained field biologist experienced in Georgia ecology conducted a review of environmental conditions at each location. Jurisdictional waters of the US, including wetlands, streams, and other open water bodies, were identified based on a visual



## Central Georgia HPC 6 Corridor Management Plan

inspection. The approximate limits of jurisdictional areas are illustrated on improvement location maps within the five-page worksheets. Detailed field surveys were not conducted and specific wetland boundaries were not delineated. A cursory review of the deficient corridors for federally protected threatened or endangered species (flora and fauna) and suitable habitat was also conducted. The review was based on a visual inspection and no detailed field surveys were conducted. Surveys for aquatic species were not conducted.

The survey for historic resources (structures) that may potentially be eligible for listing on the National Register of Historic Places was based on a visual inspection of structures located within the potential viewshed of the deficient corridors (the area of potential effect). Qualified historians experienced in Georgia architectural history conducted the survey. Individual property forms were not completed and concurrence from the State Historic Preservation Officer was not requested.

The deficiencies were not surveyed for archaeological or hazardous waste sites. An archaeological survey, conducted by a certified archaeological principal investigator, would be required as part of any future specific project development. Hazardous waste sites also require additional specific expertise.

Due to the scope of the proposed improvements (predominantly road widening), the level of documentation required to comply with the National Environmental Policy Act (NEPA) would be either an Environmental Assessment/Finding of No Significant Impact or an Environmental Impact Statement. This determination is ultimately a decision made by the Federal Highway Administration. Projects funded by the state, without federal assistance, would be required to comply with the Georgia Environmental Policy Act (GEPA).

### Intelligent Transportation Systems Evaluation

Intelligent Transportation Systems (ITS) projects involve the use of technology for improving the movement of traffic. Some applications involve closed circuit television (CCTV), dynamic (changeable) message signs (DMS), and highway advisory radio (HAR). Several methodologies were used to understand the role currently or potentially played by ITS technologies in facilitating goods movement across the state. A thorough literature review of existing transportation plans, which included statewide ITS planning documents as well as various Transportation Improvement Program (TIP) documents, was conducted. The documents reviewed included:

- *NAVIGATOR: A Twenty Year Strategic Plan for Intelligent Transportation System Deployment in Georgia for 1999-2019*
- *Strategic Plan for the Deployment of Intelligent Transportation Systems in Georgia* (December 1997)
- *GDOT State Transportation Improvement Program (STIP) 2003-2005*
- *Chatham County Intermodal Freight Study* (May 1998)
- *Chatham County-Savannah Transportation Improvement Program: FY 2003-2005*



## Central Georgia HPC 6 Corridor Management Plan

- *Columbus-Phenix City Transportation Improvement Program: YR 2003-2005*
- *Transportation Improvement Program: Fiscal Years 2003-2005 – Macon Area Transportation Study*
- *Warner Robins Area Transportation Improvement Program: FY 2003-2005*

In addition to a thorough literature review, the corridor's demographics, geography, roadway characteristics, traffic counts, and commodity flows were studied. This information was studied to better understand how ITS might impact the following transportation system elements:

- Types of goods currently moving through the corridor
- Conditions of the roadways
- Passenger vehicle/truck traffic ratios on various highways
- Existence of passing lanes
- Identification of locations prone to weather hazards
- Vehicular congestion levels
- Population densities
- High vehicular crash zones (both trucks and autos)
- Potential power sources (electricity and solar power)
- Existing communications resources (cellular coverage, landline [telephone], and existing fiber optic cable)

HPC 6 was chronicled through photographs and notes outlining existing and potential ITS application areas. During these on-site visits, interviews were conducted with local residents and officials. These one-on-one interviews revealed historical information surrounding the respective corridor deficiency.

To identify specific transportation challenges at the Port of Savannah, a meeting was held with Georgia Ports Authority personnel. This visit included an overview of statewide (Savannah, Brunswick, and Columbus) port operations, a briefing on port properties (existing and planned), port commodity flows (current and projected), and a description of the port railroad traffic, port truck traffic, and local resident traffic patterns. Several of the port's traffic and growth challenges that can potentially be alleviated with the deployment of various ITS technology schemes were highlighted (Figure 3.2).

The final method used to determine potential ITS solutions to the Central Georgia Corridor's freight related transportation challenges was to directly interact with transportation stakeholders through facilitated stakeholder workshops with community leaders and residents in centrally located communities, including Columbus, Macon, Dublin, Vidalia, Americus, and Savannah.



**Figure 3.2: Port of Savannah Intermodal Terminal Road Crossing**



These publicly held meetings provided stakeholders with the opportunity to discuss various transportation challenges existing in their respective regions within the corridor study area. When discussing corridor challenges, stakeholders described problems that could often be easily and inexpensively addressed through various ITS technology applications. The evaluation above, combined with extensive knowledge of existing and planned ITS deployments across the United States, provided the background for identifying ITS strategies that could facilitate freight movements throughout the corridor.

### Transportation Modeling

The evaluation of roadway improvements for the Central Georgia Corridor Study was conducted using the roadway network planning tool developed specifically for this project, as well as IDAS software available from the Federal Highway Administration. The roadway network planning tool is a program developed specifically for this project and based on ArcView Network Analyst. The tool can reassign truck trips in response to new roads (such as bypasses), faster speeds (such as those caused by upgrading a road by adding medians or access control), or additional lanes. The tool uses the shortest path for new truck assignments to identify 1998 and 2025 truck volumes for roadways in the Central Georgia Corridor. The new routings are based on paths selected by minimizing the total distance, free flow time, or congested travel time between an origin and a destination. While non-freight traffic routing is not changed by the tool, it is incorporated in calculating the congested times used in the assignment process, as well as determining the overall performance of the highway system.

IDAS was originally designed to allow ITS projects to be analyzed through the post-processing of traditional travel demand model outputs. IDAS also produces system-wide performance measures, such as hours of reduced delay, travel time savings, and



emissions reductions. As such, IDAS is ideally suited to produce evaluation measures for the Central Georgia Corridor Study, even if the improvements are not specifically ITS projects. The types of performance measures that can be produced by IDAS are shown in Table 3.1. IDAS can report these performance measures by market segment or facility type. IDAS also calculates the annualized benefit of the project compared to a control or no build condition.

**Table 3.1: IDAS Output Performance Measures**

Daily Vehicle Miles of Travel
Daily Vehicle Hours of Travel
Daily Average Speed
Annual Number of Fatality Accidents
Annual Number of Injury Accidents
Annual Number of Property Damage Only Accidents
Daily Travel Time Reliability (hours of unexpected delay)
Daily Fuel Consumption (gallons)
Daily Hydrocarbon and Reactive Organic Gases Emissions (tons)
Daily Carbon Monoxide Emissions (tons)
Daily Nitrous Oxide Emissions (tons)

For the Central Georgia Corridor Study, the national default values in IDAS were used. The markets defined were freight trucks, as forecast from the Transearch freight database, and non-freight traffic, as forecast from HPMS traffic counts. The facility types of the roadway sections are the functional classifications as defined by HPMS.

The results produced by IDAS should be used for comparative purposes. While IDAS reports total Vehicle Miles Traveled (VMT), total accidents, and total fuel consumption, these totals are only for the roadway system used in the Central Georgia Corridor Study. The performance of the remainder of minor collector and local roads only indirectly affected by corridor improvements was not analyzed or reported.

In addition to its own assignment techniques, which require that trip tables and networks be formatted and adjusted for its internal use, IDAS has the ability to read loaded networks produced by other travel demand models. The trip table and network from the roadway network planning tool was exported to a TRANPLAN format to allow the use of IDAS. The assignment process in the roadway network planning tool, with a freight truck trips table routed in response to congested travel times on a network, and all auto and non-freight traffic treated as fixed preloaded volumes, was transferred to TRANPLAN. While the roadway network planning tool can still be used to determine new truck volumes in response to roadway improvements, the transfer to TRANPLAN was necessary to use IDAS for evaluation.

The roadway network planning tool and TRANPLAN can reassign freight truck volumes in response to road improvements using the attributes of those improvements





to calculate new travel times, which then determine new routings through the network. As such, only two attributes of the improvements will change the travel time on a highway section: free flow travel speed and capacity. The congestion function included in the tool and TRANPLAN calculates congested travel time by adjusting the free flow travel time (as determined from the free flow speed and length of the highway section) by a factor based on the ratio of the volume to capacity on that highway section. The closer the volume is to the capacity of the section, the greater the reduction made to the free flow travel time. It is not necessary to input the increased speed for improvements since those are calculated as part of the process. Improvements that do not directly change travel speed or capacity, such as safety or design improvements, cannot be evaluated by IDAS or the tool and must, therefore, be evaluated separately.

In order to properly analyze future conditions in the corridor, an effort was made to determine the characteristics of the highway network that are committed to take place between the 1998 original analysis year and the forecast year of 2025. Improvements were implemented between 1998 and 2001 were identified from GDOT's 2001 HPMS file of roadway infrastructure. Improvements that are either underway in the current STIP, or part of the committed completion of the GRIP system of four-lane roads, were also identified. Increases in capacity, and an increase in design travel speed through improvements in operation, alignment or access control, were applied to the 1998 highway network. The network represents the expected conditions in 2025 before any improvements identified in this study are undertaken in the Central Georgia Corridor. The location of these improvements is shown in Figure 3.3. The subsequent number of lanes, which is a principal determinant of capacity, is shown in Figure 3.4. The 2025 no build highway network, reflecting existing conditions, represented the control network in IDAS for which the improvement alternatives were compared.

### Alternative Improvements

Two alternative improvement scenarios were developed to test the benefit of improvements in the Central Georgia Corridor. Each alternative consisted of a package of projects identified to improve freight movement through the corridor. The packages are identical for all deficient locations, with the exception of projects along SR 96 in Peach, Houston, and Twiggs Counties.

This section of roadway is the only part of HPC 6 in Georgia that is two lanes without an existing project to widen to at least four lanes. Alternative 1 tested operational improvements on SR 96 in Houston County between I-75 and SR 247, a location of identified congestion, while Alternative 2 tested widening to four lanes on SR 96 between Fort Valley and I-16. Improvements tested in both alternatives are listed in Table 3.2. Two additional areas for improvement near the Port of Savannah, the I-16 at SR 307 interchange and a connection between SR 21 and SR 25 at the eastern end of Jimmy DeLoach Parkway, were also identified. These two additional improvements were not identified through technical analysis, but rather through discussions between stakeholders in the Savannah area, GDOT staff, and the consultant team.



Figure 3.3: 2025 No Build Committed Improvements

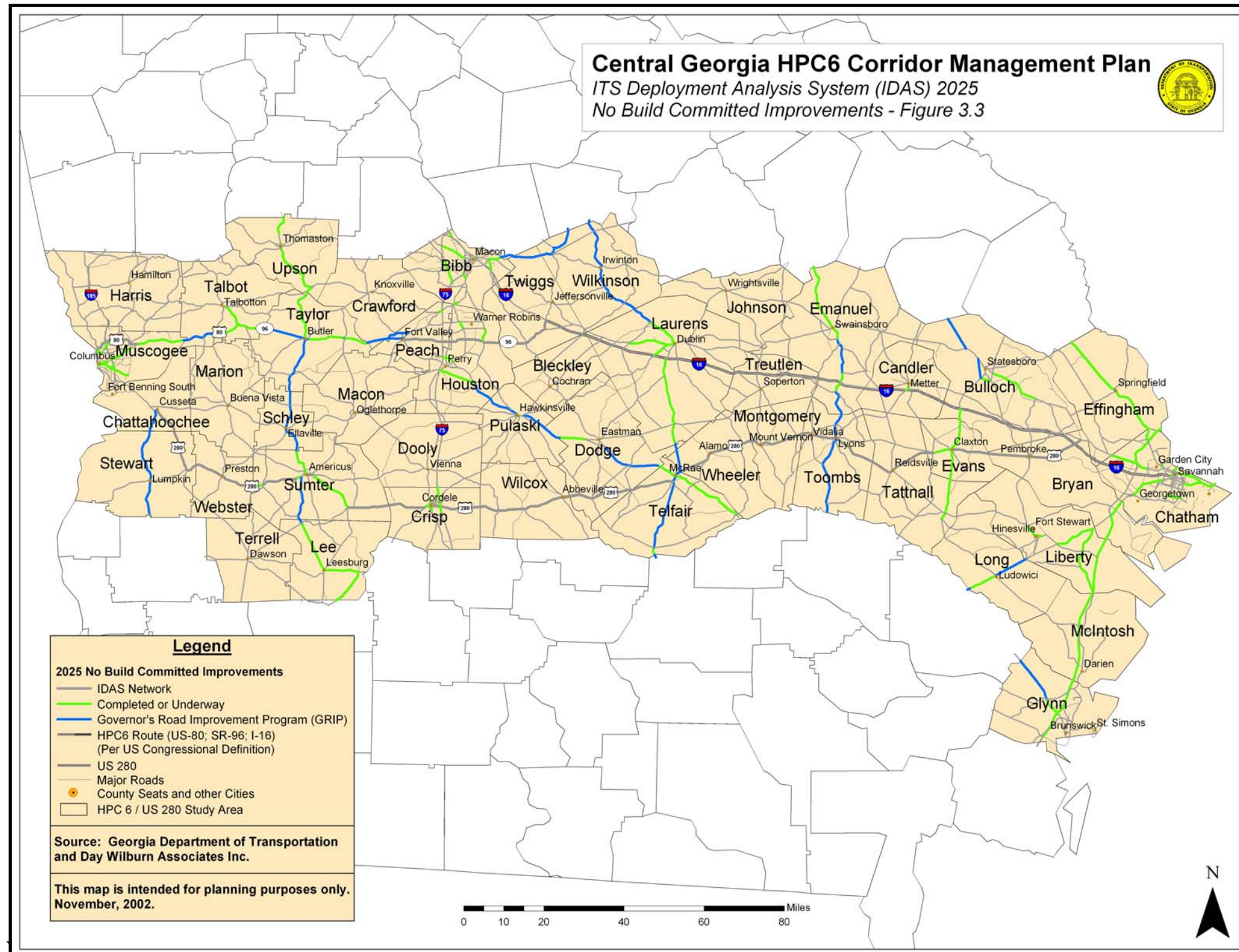
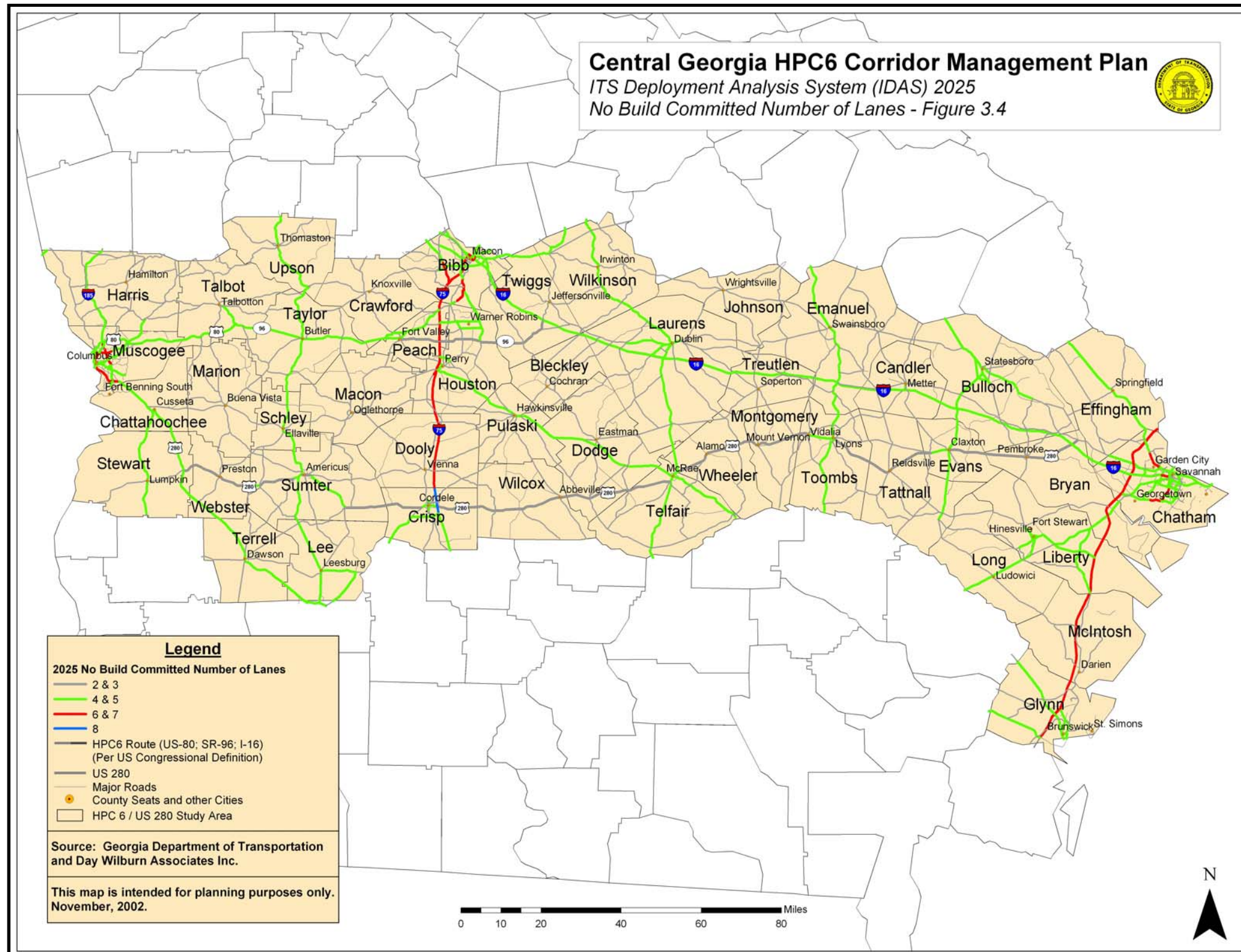






Figure 3.4: 2025 No Build Committed Number of Lanes





## Central Georgia HPC 6 Corridor Management Plan

**Table 3.2: List of Projects**

MAP CODE	MAIN ROUTE	COUNTY	DEFICIENCY LOCATION DESCRIPTION	PROJECT DESCRIPTION
77	I-75	Bibb	I-75 from S Bibb County line to I-475	Widen I-75 from six to eight lanes
79	SR 49	Bibb	SR 49 N of Macon 1/2 mile E of US 129 traveling east for 1.7 mile	Widen SR 49 from five lanes to six lanes divided
83	US 129	Bibb	US 129 from SR49 to first N Bibb County line	Widen US 129 from four to six lanes from .5 miles north of SR 49 to .5 miles north of Graham Road; Widen US 129 from six to eight lanes from I-16 to .5 miles north of SR 49
85	US 41	Bibb	US 41 between Houston Road and US 129	Widen US 41 from six to eight lanes
88	US 41	Bibb	US 41 between US 129 and I-75	Widen US 41 from five lanes to six lanes divided
436	US 23	Bibb	US 23 from I-16 to US 129	Widen US 129 from four to six lanes from .5 miles north of SR 49 to .5 miles north of Graham Road and Widen US 129 from six to eight lanes from I-16 to .5 miles north of SR 49
519	US 129	Bibb	US 129 from S Bibb County line to SR 41	Widen US 129 from four to six lanes divided
94	I-16	Bryan	I-16 East County Line to US 280	Widen I-16 from four to six lanes.
95	I-95	Bryan	I-95 between N Bryan County line and S Bryan County line	Widen I-95 from six to eight lanes 1 mile south of US 17 to north county line
98	US 301 Bypass	Bulloch	US 301 Bypass from US 80 to SR 67	Widen US 301 from two to four lanes divided
104	SR 21	Chatham	Derenne Ave (SR 21) from I-516 to Abercorn	Reconstruct Derenne Avenue from I-516 to Truman Parkway as a four-lane freeway with Interchange at Abercorn and Truman Parkway.
105	I-16	Chatham	I-16 from three miles east of Effingham County line to end of I-16 in downtown Savannah	Widen I-16 from four to six lanes throughout Chatham County and reconstruct I-16/ I-95 interchange and I-16/ I-516.



## Central Georgia HPC 6 Corridor Management Plan

**Table 3.2: List of Projects (cont'd.)**

MAP CODE	MAIN ROUTE	COUNTY	DEFICIENCY LOCATION DESCRIPTION	PROJECT DESCRIPTION
106	I-516	Chatham	I-516 from SR 21 interchange in Garden City to Derenne Ave.	Widen I-516 from four to six lanes.
107	I-95	Chatham	I-95 from S Chatham County line to N Chatham County line	Widen I-95 from six to eight lanes.
113	SR 204	Chatham	SR 204 from US 17 to LSW - Bypass	Reconstruct SR 204 from four-lane arterial to six-lane Freeway
117	SR 25	Chatham	SR 25 from SR 25C to SR 21 Spur	Widen SR 25 from five lanes to six lanes divided
514	SR 21 Spur	Chatham	SR 21 Spur in Savannah from SR 25 E to end of road	Widen SR 21 SPUR from two lanes to five lanes.
600	SR 307	Chatham	SR 307 (Dean Forest Road)/ Interstate 16 Interchange	SR 307 (Dean Forest Road)/ Interstate 16 Interchange
601	New Location	Chatham	Jimmy DeLoach Parkway Extension from SR 21 to SR 25	Jimmy DeLoach Parkway Extension from SR 21 to SR 25
129	I-75	Crisp	I-75 from S Crisp County line to N Crisp County line	Widen I-75 from four to eight lanes.
133	I-75	Dooly	I-75 from SR 230 to South of US 41	Widen I-75 from six to eight lanes.
134	I-16	Effingham	I-16 from W Effingham County line to E Effingham County line	Widen I-16 from four to six lanes.
138	I-95	Glynn	I-95 from US 82/17 to US 25	Widen I-95 from four to six lanes.
143	I-185	Harris	I-185 from 4.5 mi north of US 80 to SR 315	Widen I-185 from four to six lanes.
145	I-75	Houston	I-75 from S Houston County line to N Houston County line	Widen I-75 from 6 to 8 lanes.
148	SR 96	Houston	SR 96 from Houston Lake Road to US 129	Alternative 1 - Operational Improvements between Houston Lake Road and SR 247; Alternative 2 - Widen SR 96 to four lanes divided from Fort Valley bypass to I-16
149	US 129	Houston	US 129 from SR 247C to SR 96	Widen US 129 from five lanes to six lanes divided



## Central Georgia HPC 6 Corridor Management Plan

**Table 3.2: List of Projects (cont'd.)**

MAP CODE	MAIN ROUTE	COUNTY	DEFICIENCY LOCATION DESCRIPTION	PROJECT DESCRIPTION
468	SR 119	Liberty	SR 119 in Hinesville from SR 196 E for 2.5 mi (common part of SR 119 and SR 196)	Widen SR 119 from four lanes to six lanes.
0	US 80	Muscogee	US 80 from .6 mi. SW of SR 22 to I-185	Widen US 80 from four lanes to six lanes
168	I-185	Muscogee	I-185 from US 27 to US 280	Construct parallel facility east of I-185 connecting US 280 and US 80
169	I-185	Muscogee	I-185 from US 80 to N Muscogee County line	Widen I-185 from four to six lanes.
178	US 27	Muscogee	US 27/ US 280 from W Georgia State line to 1.5 mi east of I-185	Construct four-lane freeway with four-lane frontage road.
179	I-75	Peach	I-75 from S Peach County line to N Peach County line	Widen I-75 from six to eight lanes.
458	SR 96	Peach	SR 96 from SR 7C to US 341 in Ft. Valley	Connect Fort Valley Bypass (SR 49C) to SR 96 east of Fort Valley connecting existing bypass to SR 96.

### Alternative 1 Improvements

Alternative 1 consisted of improvements addressing identified corridor deficiencies for which no funding commitments have been made. These improvements principally take the form of adding additional travel lanes. The unique element of Alternative 1 was operational improvements on SR 96 between I-75 and SR 247 to improve free flow speed through the corridor. This would be accomplished through access control, improvements in traffic control, and the addition of turning lanes, but not the widening of the general travel lanes beyond the current two-lane cross-section. The location of these improvements is shown in Figure 3.5. The resulting number of lanes, which is a principal determinant of capacity, is shown in Figure 3.6. Improvements in performance, including those for vehicles that do not change routes, were evaluated by IDAS and are discussed in a later section. The operational improvements to SR 96 did not result in any rerouting of freight truck traffic.





Figure 3.5: 2025 Alternative 1 Improvements

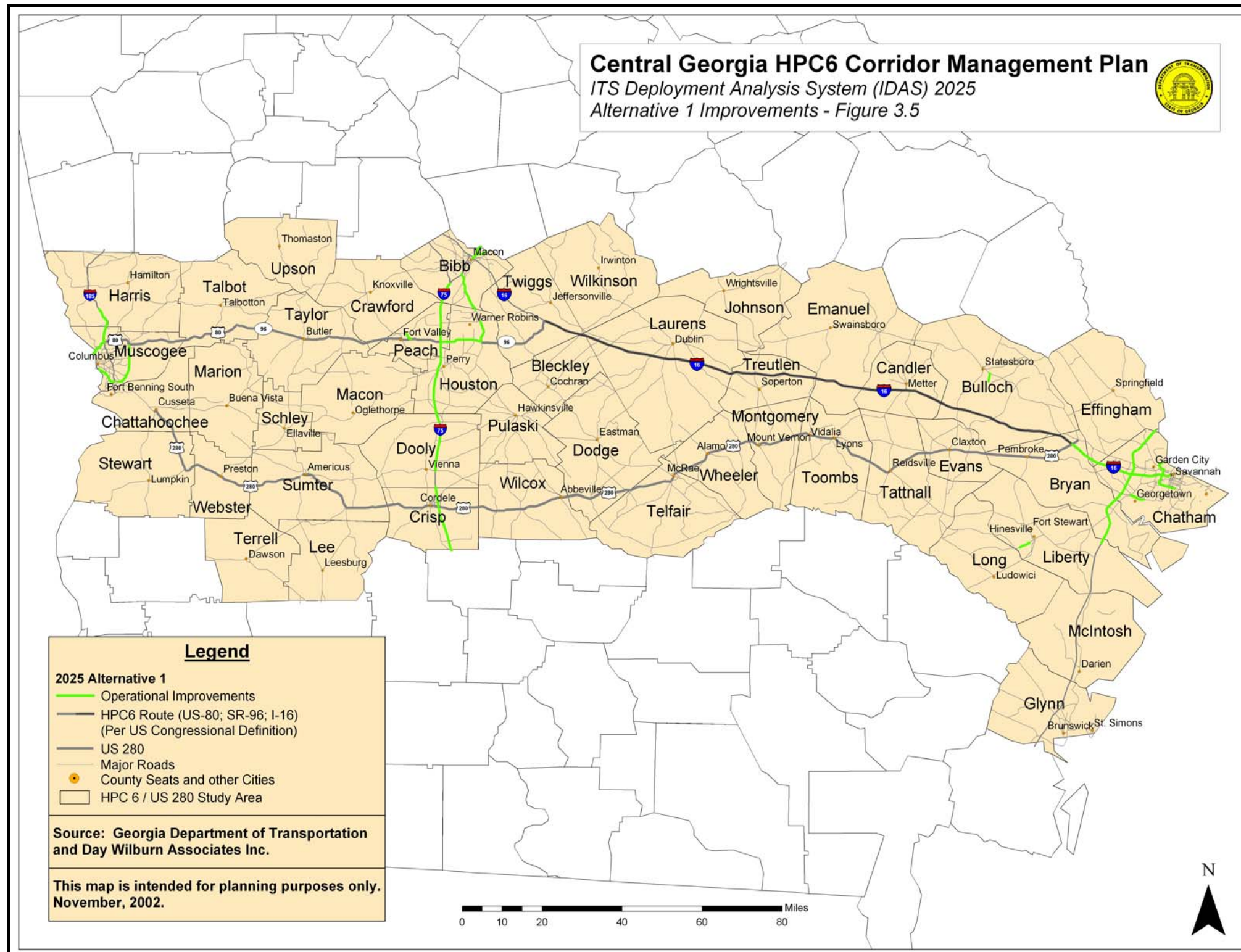
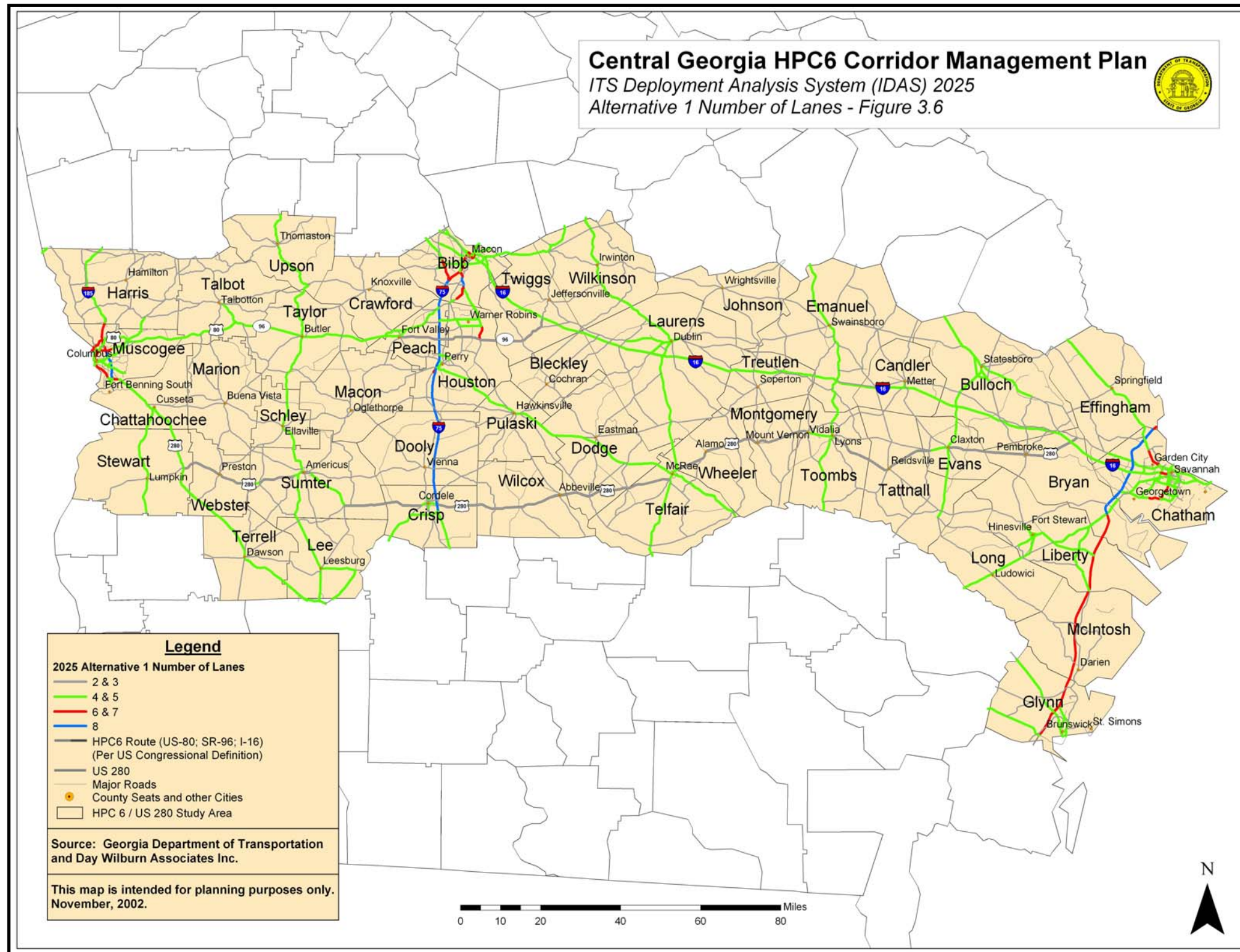






Figure 3.6: 2025 Alternative 1 Number of Lanes





### Alternative 2 Improvements

In addition to the improvements identified in Alternative 1, Alternative 2 included proposed road widening improvements on SR 96 from the Fort Valley Bypass to I-16. In Alternative 2, SR 96 is proposed for widening from the current two-lane cross-section to four-lanes. The location of these improvements is shown in Figure 3.7. The resulting number of lanes, which is a principal determinant of capacity, is shown in Figure 3.8. Improvements in performance, including those for vehicles that do not change routes, were evaluated by IDAS and are discussed in a later section.

The widening of SR 96 did result in the rerouting of truck traffic. Approximately 750 freight trucks per day are forecast to shift from a route between Fort Valley and I-16 along SR 49, I-75 and I-16 to the direct route provided by an improved SR 96. Approximately 25 trucks per day, between Columbus and Brunswick, are forecast to shift from a route consisting of US 280 and US 341 to a route consisting of SR 96 (including the improved section), I-16 and I-95. A small amount of freight truck traffic between Columbus and Macon is forecast to shift from a route consisting of US 80 to one consisting of SR 96 and I-75. Approximately 125 trucks per day traveling between Warner Robins and Gordon are forecast to shift from a route consisting of Houston Street, US 129 and SR 57 to a route consisting of the improved SR 96 and SR 18. Additional minor shifts in traffic are forecast away from parallel routes to access roads connecting to the improved HPC 6. The corridor-wide changes in daily truck volumes are shown in Figure 3.9. Detailed changes in the SR 96 improvement area, with posted changes in truck volumes, are shown in Figure 3.10. It should be noted that these changes only reflect the freight truck traffic that can be rerouted by the tool. It is likely that this improvement will also shift some of the non-freight background traffic in the tool. Improvements to the corridor may also further induce other shifts in distribution of freight traffic.

### **Evaluation of System Performance**

The system performance for each alternative was analyzed using IDAS, based on the volumes, speeds, and capacities from the tool. The results of the IDAS evaluation for freight truck and non-freight traffic, which does not include conditions on minor collector and local roads, are shown in Tables 3.3. and 3.4. The monetary benefits of those results are shown in Tables 3.5 and 3.6.

From a system perspective, no build conditions in the Central Georgia Corridor will be quite good in 2025, reflecting the investments underway and committed by GDOT (completed projects, STIP, and GRIP). Average speed is forecast to be 47.1 mph for the entire major roadway network. Travel time reliability expressed as hours of unexpected delay is a small portion of total travel time (444 hours per day, which is only 0.03% of the normal expected daily vehicle hours of travel).





Figure 3.7: 2025 Alternative 2 Improvements

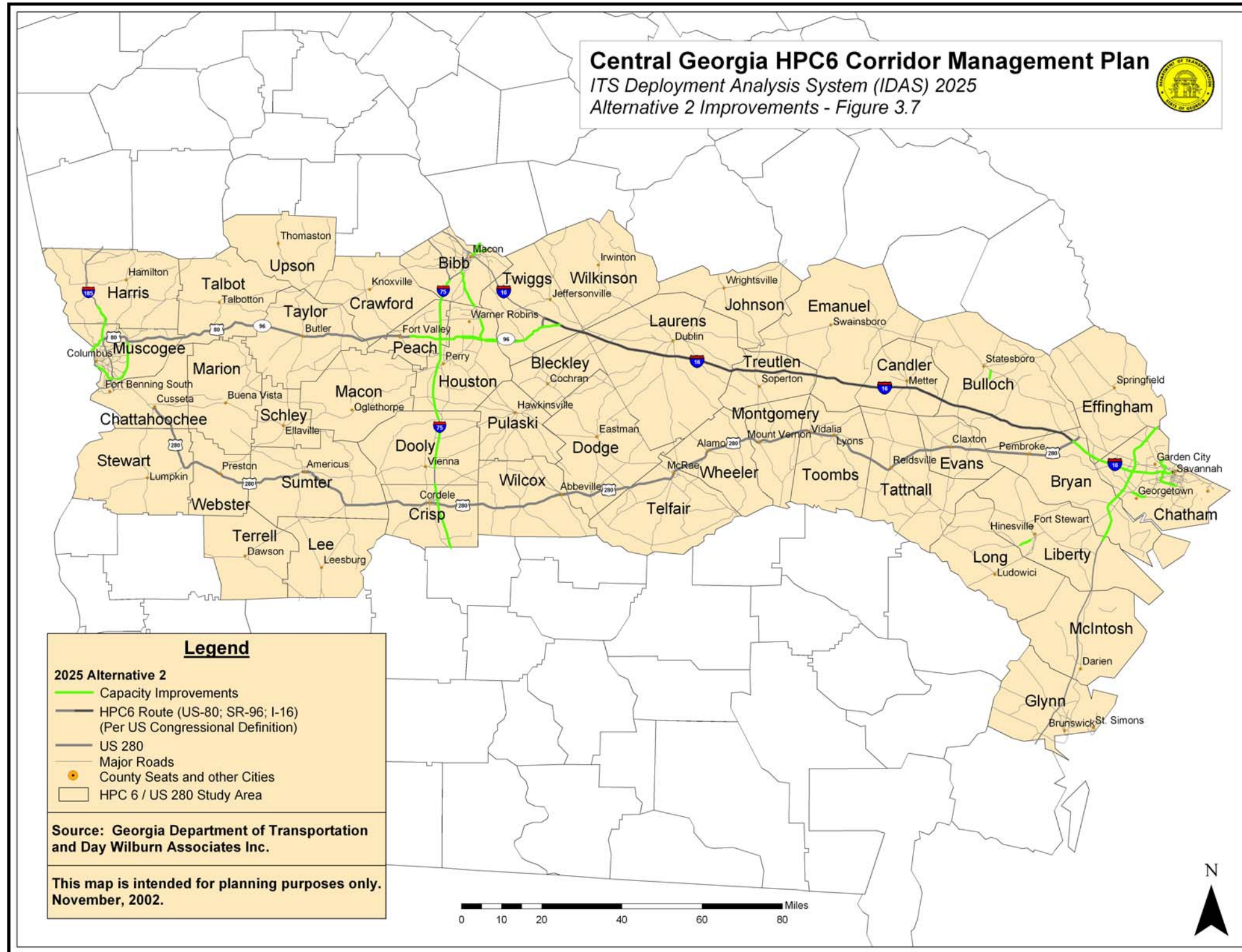






Figure 3.8: 2025 Alternative 2 Number of Lanes

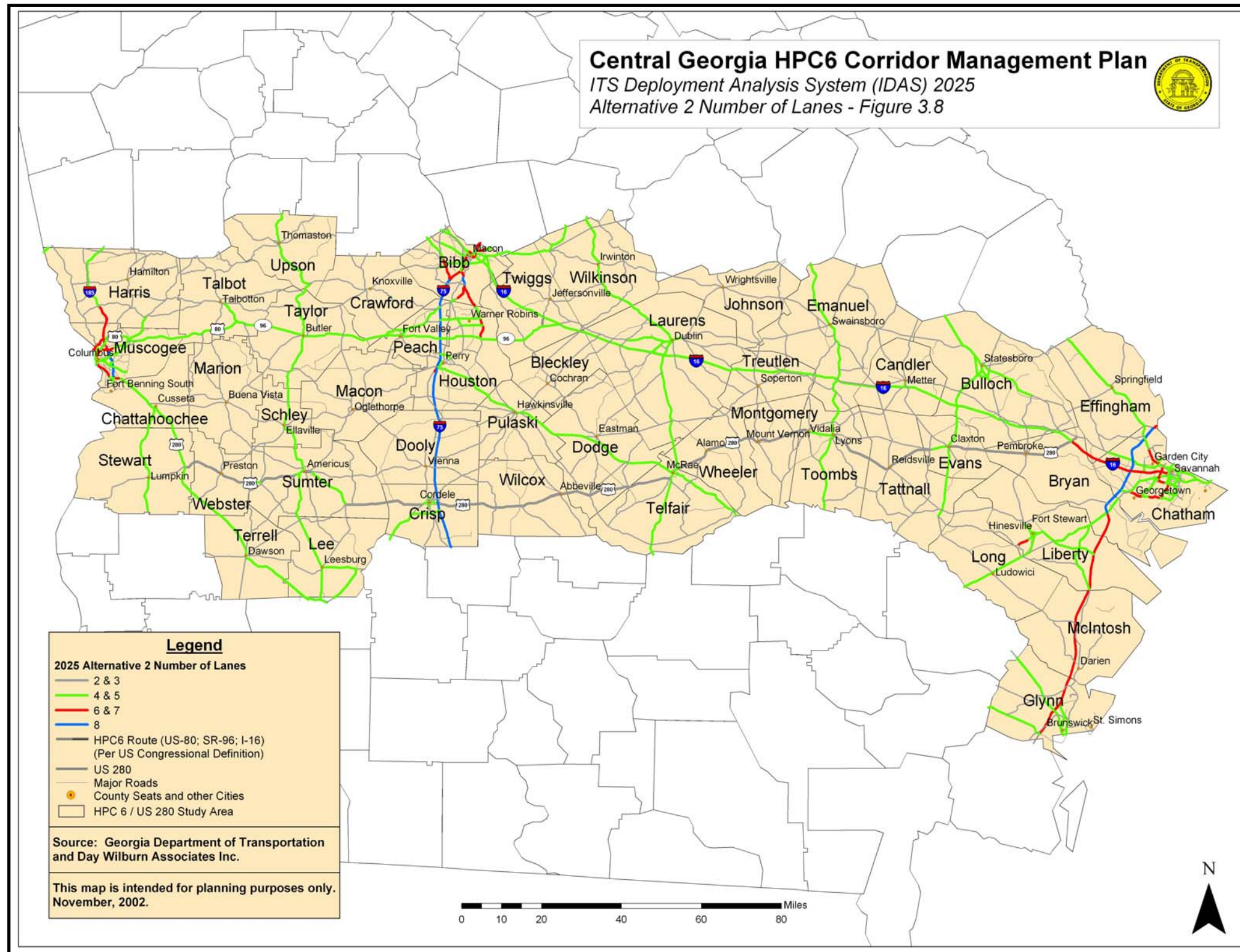






Figure 3.9: 2025 Alternative 2 Changes in Daily Truck Volumes

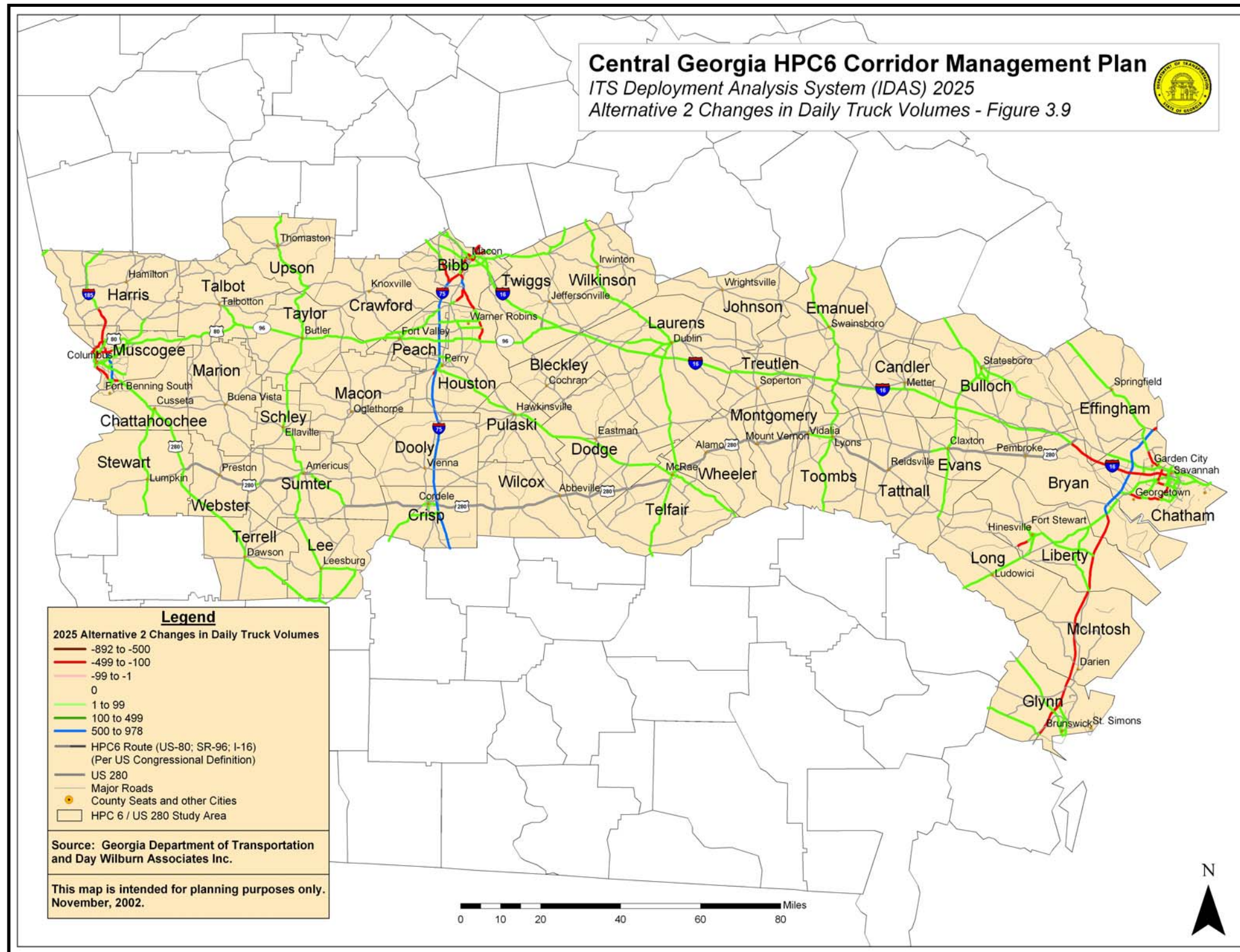
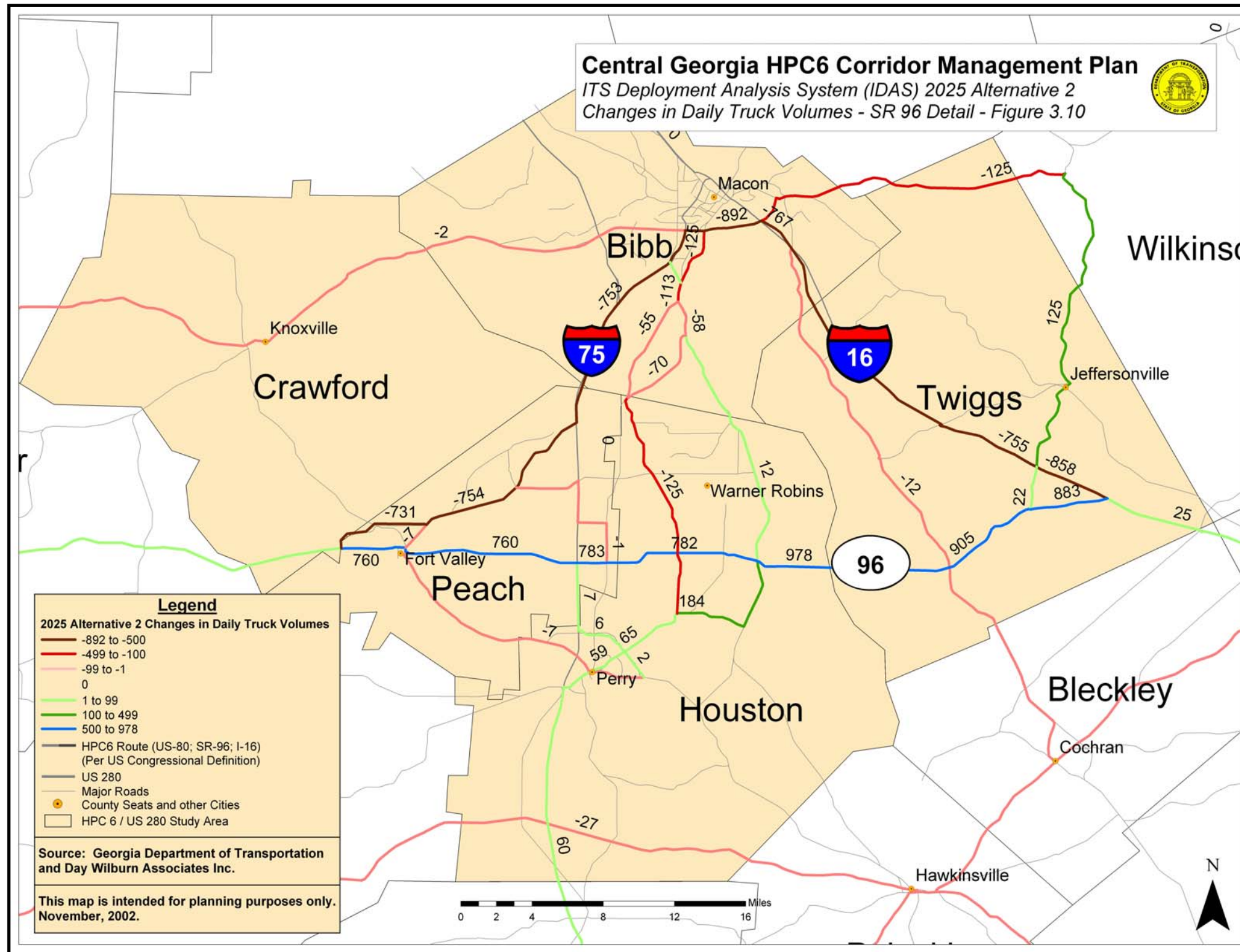






Figure 3.10: 2025 Alternative 2 Changes in Daily Truck Volumes- SR 96 Detail





## Central Georgia HPC 6 Corridor Management Plan

**Table 3.3: System Performance Alternative 1 vs. No Build**

By Market Sector	Freight Trucks	Non-Freight	Total
<b>Daily Vehicle Miles of Travel</b>			
No Build	5,077,269	55,412,900	60,490,169
Alternative 1	5,077,061	55,412,900	60,489,961
Difference (%)	-209(0.0%)	0(0.0%)	-209(0.0%)
<b>Daily Vehicle Hours of Travel</b>			
No Build	86,733	1,197,541	1,284,274
Alternative 1	85,992	1,173,570	1,259,562
Difference (%)	-741(-0.9%)	-23,971(-2.0%)	-24,712(-1.9%)
<b>Daily Average Speed</b>			
No Build	58.5	46.3	47.1
Alternative 1	59.0	47.2	48.0
Difference (%)	0.5(0.9%)	0.9(2.0%)	0.9(1.9%)
<b>Annual Number of Fatality Accidents</b>			
No Build	0.0	0.3	0.3
Alternative 1	0.0	0.3	0.3
Difference (%)	.(0.0%)	.(0.1%)	.(0.1%)
<b>Annual Number of Injury Accidents</b>			
No Build	6.8	49.7	56.5
Alternative 1	6.8	49.7	56.5
Difference (%)	-.037(-0.5%)	-.026(-0.1%)	-.063(-0.1%)
<b>Annual Number of PDO Accidents</b>			
No Build	9.8	75.1	84.9
Alternative 1	9.8	75.1	84.9
Difference (%)	.001(0.0%)	-.044(-0.1%)	-.042(0.0%)
<b>Daily Travel Time Reliability (hours of unexpected delay)</b>			
No Build	27.61	416.40	444.01
Alternative 1	27.59	415.94	443.54
Difference (%)	-0.02(-0.1%)	-0.45(-0.1%)	-0.47(-0.1%)
<b>Daily Fuel Consumption (gallons)</b>			
No Build	776,914	7,297,935	8,074,848
Alternative 1	783,905	7,317,361	8,101,265
Difference (%)	6,991(0.9%)	19,426.00(0.3%)	26,417(0.3%)
<b>Daily Hydrocarbon and Reactive Organic Gases Emissions (tons)</b>			
No Build	4.60	51.79	56.39
Alternative 1	4.62	51.44	56.07
Difference (%)	0.02(0.5%)	-0.35(-0.7%)	-0.32(-0.6%)
<b>Daily Carbon Monoxide Emissions (tons)</b>			
No Build	39.99	382.74	422.73
Alternative 1	40.92	383.31	424.23
Difference (%)	0.93(2.3%)	0.57(0.1%)	1.50(0.4%)
<b>Daily Nitrous Oxide Emissions (tons)</b>			
No Build	15.03	136.13	151.16
Alternative 1	15.25	137.83	153.08
Difference (%)	0.22(1.5%)	1.70(1.3%)	1.92(1.3%)





## Central Georgia HPC 6 Corridor Management Plan

**Table 3.4: System Performance Alternative 2 vs. No Build**

By Market Sector	Freight Trucks	Non-Freight	Total
<b>Daily Vehicle Miles of Travel</b>			
No Build	5,077,269	55,412,900	60,490,169
Alternative 2	5,057,051	55,412,900	60,469,951
Difference (%)	-20,219(-0.4%)	0(0.0%)	-20,219(0.0%)
<b>Daily Vehicle Hours of Travel</b>			
No Build	86,733	1,197,541	1,284,274
Alternative 2	85,650	1,172,068	1,257,718
Difference (%)	-1,083(-1.2%)	-25,473(-2.1%)	-26,556(-2.1%)
<b>Daily Average Speed</b>			
No Build	58.5	46.3	47.1
Alternative 2	59.0	47.3	48.0
Difference (%)	0.5(0.9%)	1.0(2.2%)	0.9(2.0%)
<b>Annual Number of Fatality Accidents</b>			
No Build	0.0	0.3	0.3
Alternative 2	0.0	0.3	0.3
Difference (%)	.-(-0.5%)	.-(-0.1%)	.-(-0.1%)
<b>Annual Number of Injury Accidents</b>			
No Build	6.8	49.7	56.5
Alternative 2	6.8	49.7	56.5
Difference (%)	-.037(-0.5%)	-.026(-0.1%)	-.063(-0.1%)
<b>Annual Number of PDO Accidents</b>			
No Build	9.8	75.1	84.9
Alternative 2	9.7	75.1	84.8
Difference (%)	-.051(-0.5%)	-.044(-0.1%)	-.094(-0.1%)
<b>Daily Travel Time Reliability (hours of unexpected delay)</b>			
No Build	27.61	416.40	444.01
Alternative 2	27.36	415.12	442.48
Difference (%)	-0.25(-0.9%)	-1.27(-0.3%)	-1.53(-0.3%)
<b>Daily Fuel Consumption (gallons)</b>			
No Build	776,914	7,297,935	8,074,848
Alternative 2	780,307	7,316,846	8,097,153
Difference (%)	3,393.50(0.4%)	18,911.00(0.3%)	22,304.50(0.3%)
<b>Daily Hydrocarbon and Reactive Organic Gases Emissions (tons)</b>			
No Build	4.60	51.79	56.39
Alternative 2	4.60	51.40	56.01
Difference (%)	0.00(0.1%)	-0.38(-0.7%)	-0.38(-0.7%)
<b>Daily Carbon Monoxide Emissions (tons)</b>			
No Build	39.99	382.74	422.73
Alternative 2	40.72	382.92	423.64
Difference (%)	0.73(1.8%)	0.18(0.0%)	0.91(0.2%)
<b>Daily Nitrous Oxide Emissions (tons)</b>			
No Build	15.03	136.13	151.16
Alternative 2	15.18	137.88	153.05
Difference (%)	0.15(1.0%)	1.75(1.3%)	1.90(1.3%)



## Central Georgia HPC 6 Corridor Management Plan

**Table 3.5: Benefit Summary Alternative 1**

No-Build vs. Build Alternative 1	
<b>Change In User Travel Time</b>	
In-Vehicle Travel Time	\$ 126,961,370
Travel Time Reliability	\$ 7,221
<b>Change in Costs Paid by Users</b>	
Fuel Costs	\$ (7,503,837)
Non-fuel Operating Costs	\$ 1,262,578
Accident Costs (Internal Only)	\$ 459,256
<b>Change in External Costs</b>	
Accident Costs (External Only)	\$ 81,044
Emissions	
HC/ROG	\$ 140,802
NOx	\$ (1,771,243)
CO	\$ (1,440,645)
Noise	\$ 36,639
<b>Total Annual Benefits<sup>1</sup></b>	<b>\$ 118,233,184</b>

<sup>1</sup>Benefits are reported in 1995 dollars

**Table 3.6: Benefit Summary Alternative 2**

No-Build vs. Build Alternative 2	
<b>Change In User Travel Time</b>	
In-Vehicle Travel Time	\$ 136,436,629
Travel Time Reliability	\$ 23,512
<b>Change in Costs Paid by Users</b>	
Fuel Costs	\$ (6,335,593)
Non-fuel Operating Costs	\$ 1,756,825
Accident Costs (Internal Only)	\$ 1,052,015
<b>Change in External Costs</b>	
Accident Costs (External Only)	\$ 185,647
Emissions	
HC/ROG	\$ 165,914
NOx	\$ (1,748,136)
CO	\$ (872,879)
Noise	\$ 3,859
<b>Total Annual Benefits<sup>1</sup></b>	<b>\$ 130,667,792</b>

<sup>1</sup>Benefits are reported in 1995 dollars



## Central Georgia HPC 6 Corridor Management Plan

To address congestion on SR 96, Alternative 1 contains operational improvements (no widening) to SR 96 between I-75 and SR 247. As a result of those improvements, there is virtually no rerouting of truck traffic: VMT for freight trucks changes by less than 0.005%. Alternative 1 projects do slightly improve efficiency on SR 96, increasing average speed by almost 2%. The change in travel time reliability is minimal and not expected to be a significant issue in the corridor. The change in accidents is insignificant and a likely indication that congestion in the corridor is not affecting safety issues and, therefore, reducing congestion has no impact. While improvements from Alternative 1 do reduce hydrocarbon (HC) emissions, the higher speeds result in increases in CO and NOx emissions. Fuel consumption also increases due to the higher speeds that are forecast without any associated reduction in VMT. The monetary annual benefit of the improvements in Alternative 1 amounts to over \$118 million (in 1995 dollars), which is primarily in the form of travel time savings.

Alternative 2 includes all of the improvements from Alternative 1, as well as the upgrade of SR 96 between the Fort Valley Bypass and I-16 to a four-lane facility. This improvement between the Fort Valley Bypass and I-16 does result in the rerouting of freight trucks to the widened facility, with a shift of approximately 800 trucks per day to SR 96 from an alternate route consisting of SR 49, I-75, and I-16. The SR 96 improvements make this route competitive in travel time with the alternate route, which is 15 miles longer. In addition, other minor shifts are forecast from the US 80 and US 280 corridors. Accidents are also slightly fewer than for Alternative 1.

Emissions of HC are reduced relative to the no build conditions and to Alternative 1. Emissions of CO and NOx increase compared to the no build conditions, but are less than those of Alternative 1. In addition, travel time reliability, as measured by unexpected delay, decreases by 1.53 hours, an amount that is three times the reduction for Alternative 1. Overall, the monetary benefits of Alternative 2 amount to \$131 million per year, an increase of \$13 million over the Alternative 1 levels. In addition to the performance and benefits forecast, the SR 96 improvements will almost certainly encourage the rerouting of non-freight traffic, which will result in additional benefits.

### Summary of Key Findings

Deficient locations within the Central Georgia Corridor were identified, potential solutions defined and evaluated, and proposed improvements analyzed by IDAS based on the volumes, speeds, and capacities from the analysis tool. The key results of the evaluation are outlined below:

- There are a considerable number of improvements already underway in central Georgia, as shown previously in Figure 3.3, that address many of the identified deficiencies. With implementation of the planned improvements, the performance of the corridor's highway system is expected to be quite good.



## Central Georgia HPC 6 Corridor Management Plan

- The improvements proposed as part of Alternative 1 correct most of the remaining deficiencies. However, the operational improvements proposed for SR 96 between I-75 and SR 247 are not expected to result in any shifting of freight truck traffic to this route.
- In Alternative 2, the widening of SR 96 to four lanes from Fort Valley to I-16 results in a shift of approximately 750 freight trucks per day away from a route consisting of I-16 and I-75.
- The shift in traffic does not account for the likely usage by other non-freight traffic. Traffic that might be induced to use this route because of new business locations or distribution patterns is also not accounted for in the shift.
- Improvements in system performance include the benefits that accrue to both freight and non-freight traffic. Improvements proposed as part of Alternative 1 will reduce congestion, thus increasing overall travel speed by 2%. Since VMT is not forecast to change, there will be some increase in fuel consumption and emissions associated with those higher speeds.
- The overall annual benefit of Alternative 1 is expected to be \$118 million, primarily in the reductions in travel time. The overall annual benefit of Alternative 2 is expected to be \$131 million, also primarily in the form of reduced travel time costs. Because the difference between Alternative 2 and Alternative 1 is the SR 96 improvement to four lanes, the benefit attributable to this improvement is the difference in the overall benefit, or \$13 million per year.
- The survey for potential environmental constraints did not reveal any extraordinary constraints that would prevent project development within any particular corridor, with the exception of I-185 in the City of Columbus. Development adjacent to the corridor is dense and provides very little ability for future widening. While all of the proposed corridors would be limited by some environmental constraints, specific improvements could be developed with appropriate planning and avoidance/minimization of impacts. Detailed environmental assessments and coordination with appropriate agencies will need to be conducted prior to implementation of any improvement.



## 4 Implementation Program

The methodology for identifying deficiencies and improvements was described in detail in Chapter 3. As a result of the screening process utilizing freight movement, safety, and capacity criteria, projects were developed for 34 deficient locations, as depicted in Figure 4.1. The projects can generally be categorized as existing roadway widenings (79%), major reconstruction (12%), or new location roadways (9%). Multi-page worksheets for each project, containing maps, photographs, need and purpose statements, transportation data, proposed typical sections, preliminary environmental documentation, and other information, are provided in Appendix A.

### Project Phasing

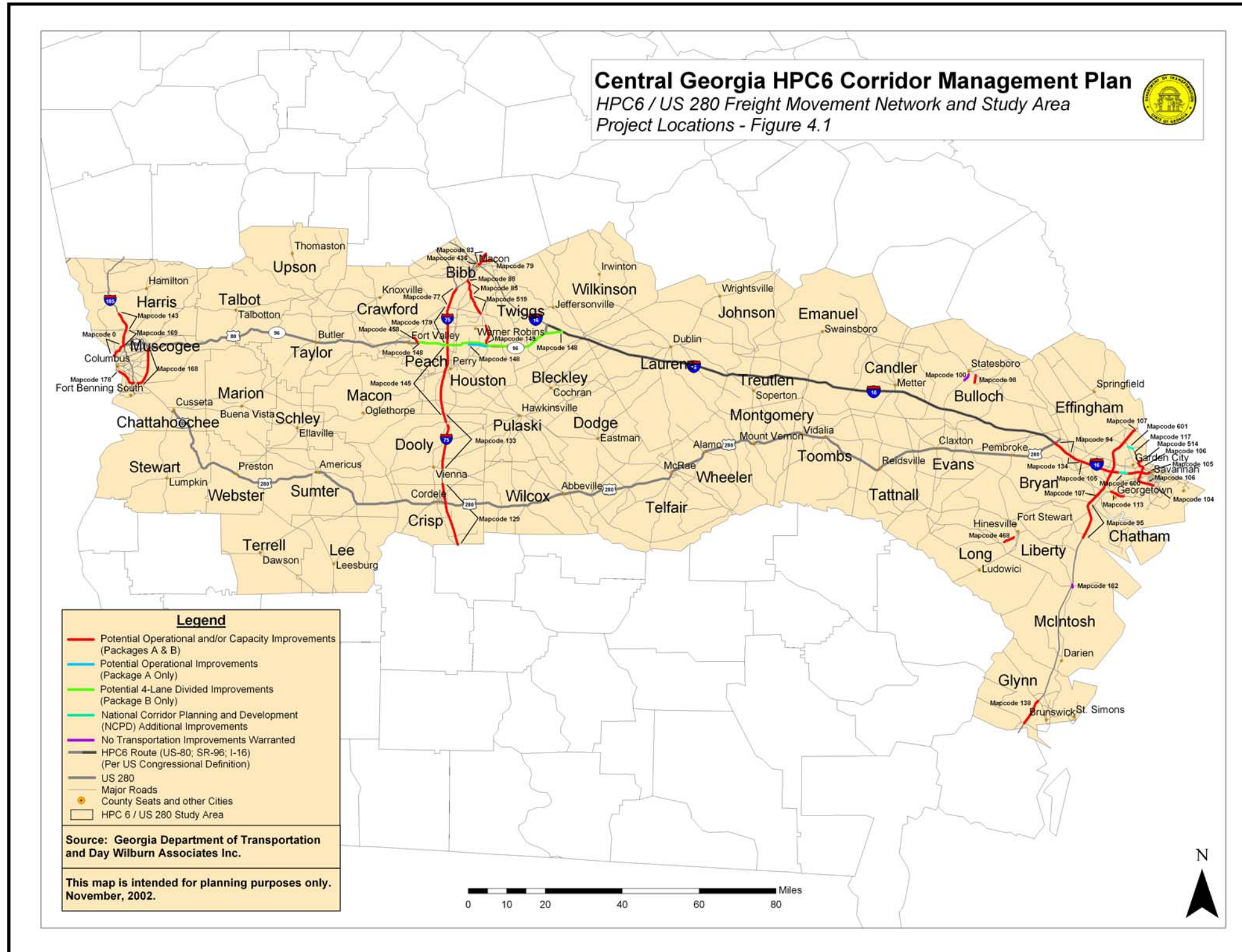
Project phasing is suggested based on current and future v/c ratios. The more severe the problem in the short-term, the sooner the improvement is proposed. The exception is where a proposed improvement could be particularly complicated, exceedingly expensive, or controversial. In many such cases, the phase is shown as mid-term to allow for lead-time in obtaining input from local governments and citizens. A second consideration is the importance of a route to military and freight movement between military installations and Georgia's Atlantic ports. Project descriptions, recommended phase of implementation, cost estimates, and potential funding sources are shown in Table 4.1.

Short-range (2003-2008) projects total approximately \$85 million. These projects are strategically important in terms of national defense and freight movement. Two improvements, the Jimmy DeLoach Extension (*map code 601*) and the interchange improvement at I-16/Dean Forest Road (*map code 600*), would provide improved access to the Port of Savannah. The Fort Valley bypass extension in Peach County (*map code 458*) between SR 49C and SR 96 would eliminate traffic congestion in the town of Fort Valley and expedite freight and military traffic movements on HPC 6. The SR 96 improvements in Houston County (*map code 148*) would improve areas with congestion along the STRAHNET route. These projects would all be competitive for NCPD funding.

Mid-range (2009-2015) projects, which would further enhance the movement of freight and military traffic in the HPC 6 Corridor and surrounding areas, would cost an estimated \$280 million. The two most costly initiatives are located along SR 96 in Houston County. However, these improvements make the most difference in regional freight movement, according to transportation model analysis. Following implementation of the short-range SR 96 projects, a reanalysis of the SR 96 corridor between Fort Valley and I-16 will be needed to reaffirm the need for the next phase of improvements. A variety of funding sources would be required to implement these mid-range projects.



Figure 4.1: Project Locations







## Central Georgia HPC 6 Corridor Management Plan

**Table 4.1: Project Phases and Cost Estimates**

MAP CODE	MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	POTENTIAL FUNDING SOURCE <sup>1</sup>	COST ESTIMATE	PHASE <sup>2</sup>
600	SR 307/ I-16	Chatham	SR 307 (Dean Forest Road)/I-16 interchange improvement	NCPD	\$27,774,440	S
601	New Location	Chatham	Jimmy DeLoach Parkway Extension from SR 21 to SR 25	NCPD	\$15,137,043	S
148	SR 96	Houston	Phase 1 of 5: Operational improvements, intersection improvements, and turn lanes on SR 96 between I-75 and SR 247	NCPD	\$25,785,772	S
458	SR 96	Peach	Connect Fort Valley Bypass (SR 49C) to SR 96 east of Fort Valley connecting existing bypass to SR 96	NCPD	\$16,061,847	S
Subtotal	(Short-Range)				\$84,759,102	
79	SR 49	Bibb	Widen SR 49 from five lanes to six-lane divided from Maynard Street to New Clinton Road	Various State/ Federal	\$20,314,355	M
88	US 41	Bibb	Widen US 41 from five lanes to six-lane divided between US 129 and I-75	Various State/ Federal	\$7,545,000	M
98	US 301 BYPASS	Bulloch	Widen US 301 from two lanes to four-lane divided from US 80 to SR 67	Various State/ Federal	\$3,991,972	M
113	SR 204	Chatham	Reconstruct SR 204 from four-lane arterial to six-lane freeway from US 17 to Veterans Parkway	Various State/ Federal	\$29,475,873	M

<sup>1</sup> *r Planning and Development; IM = Interstate Maintenance; STP = Surface Transportation Program; NHS = National Highway System*

<sup>2</sup> *S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred*



## Central Georgia HPC 6 Corridor Management Plan

**Table 4.1: Project Phases and Cost Estimates (cont'd.)**

MAP CODE	MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	POTENTIAL FUNDING SOURCE <sup>1</sup>	COST ESTIMATE	PHASE <sup>2</sup>
514	SR 21 SPUR	Chatham	Widen SR 21 Spur from two to five lanes from SR 25 E to end of road	Various State/ Federal	\$13,018,714	M
148	SR 96	Houston	Phase 2 of 5: Operational and grade separation improvements on SR 96 between I-75 and Ocmulgee River	NCPD	\$67,985,990	M
148	SR 96	Houston	Phase 3 of 5: Purchase ROW for future four-lane divided roadway and frontage roads on SR 96 between Lake Joy Road and Thompson Mill Road	NCPD	\$95,811,467	M
468	SR 119	Liberty	Widen the common part of SR 119 and SR 196 from four to six lanes	Various State/ Federal	\$24,491,990	M
0	US 80	Muscogee	Widen US 80 from the Alabama State line to I-185 from four to six lanes	Various State/ Federal	\$17,419,612	M
Subtotal	(Mid-Range)				\$280,054,973	
83	US 129	Bibb	Widen US 129 from four to six lanes from .5 miles north of SR 49 to .5 miles north of North Graham Road and widen US 129 from six to eight lanes from US 23 to .5 miles north of SR 49	Various State/ Federal	\$44,795,300	L
85	US 41	Bibb	Widen US 41 between Houston Road and US 129 from 6 to 8 lanes	Various State/ Federal	\$42,232,167	L

<sup>1</sup> NCPD = National Corridor Planning and Development; IM = Interstate Maintenance; STP = Surface Transportation Program; NHS = National Highway System

<sup>2</sup> S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred



## Central Georgia HPC 6 Corridor Management Plan

**Table 4.1: Project Phases and Cost Estimates (cont'd.)**

MAP CODE	MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	POTENTIAL FUNDING SOURCE <sup>1</sup>	COST ESTIMATE	PHASE <sup>2</sup>
436	US 23	Bibb	Widen US 129 from six to eight lanes from I-16 EB exit ramp to US 23/ Emery Hwy.	Various State/ Federal	\$4,377,731	L
519	US 129	Bibb	Widen US 129 from four lanes to six-lane divided from south Bibb County line to SR 41	Various State/ Federal	\$35,822,663	L
104	SR 21	Chatham	Reconstruct Derenne Avenue from I-516 to Truman Parkway as a four-lane freeway with interchange at Abercorn and Truman Parkway	Various State/ Federal	\$147,944,762	L
117	SR 25	Chatham	Widen SR 25 from five lanes to six-lane divided from SR 25C to SR 21 Spur	Various State/ Federal	\$9,142,592	L
148	SR 96	Houston	Phase 4 of 5: Widen SR 96 from two lanes to four-lane divided from US 41 to Thompson Mill Road	NCPD	\$92,737,050	L
148	SR 96	Houston	Phase 5 of 5: Widen SR 96 from two to four lanes from Fort Valley to US 41 and from Thompson Mill Rd to I-16	NCPD	\$87,780,944	L
149	US 129	Houston	Widen US 129 from five lanes to six-lane divided from SR 247 C to SR 96	Various State/ Federal	\$43,140,195	L

<sup>1</sup> NCPD = National Corridor Planning and Development; IM = Interstate Maintenance; STP = Surface Transportation Program; NHS = National Highway System

<sup>2</sup> S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred



## Central Georgia HPC 6 Corridor Management Plan

**Table 4.1: Project Phases and Cost Estimates (cont'd.)**

MAP CODE	MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	POTENTIAL FUNDING SOURCE <sup>1</sup>	COST ESTIMATE	PHASE <sup>2</sup>
178	US 27	Muscogee	Construct four-lane freeway with four-lane frontage road on US 27/US 280 from Alabama State line to 1.5 miles east of I-185	Various State/ Federal	\$264,901,144	L
Subtotal	(Long-Range)				\$772,874,548	
77	I-75	Bibb	Widen I-75 from six to eight lanes from south Bibb County line to I-475	IM, STP, or NHS	\$17,329,096	D
94	I-16	Bryan	Widen I-16 from four to six lanes from east Bryan County line to US 280	IM, STP, or NHS	\$24,143,847	D
95	I-95	Bryan	Widen I-95 from six to eight lanes one mile south of US 17 to north Bryan County line	IM, STP, or NHS	\$19,274,262	D
105	I-16	Chatham	Widen I-16 from four to six lanes throughout Chatham County and reconstruct I-16/I-95 interchange and I-16/I-516	IM, STP, or NHS	\$69,336,434	D
106	I-516	Chatham	Widen the entire I-516 corridor from four to six lanes	IM, STP, or NHS	\$42,909,392	D
107	I-95	Chatham	Widen I-95 from six to eight lanes throughout Chatham County	IM, STP, or NHS	\$93,785,574	D
129	I-75	Crisp	Widen I-75 from four to eight lanes throughout Crisp County	IM, STP, or NHS	\$69,725,099	D

<sup>1</sup> NCPD = National Corridor Planning and Development; IM = Interstate Maintenance; STP = Surface Transportation Program; NHS = National Highway System

<sup>2</sup> S = Short-Range; M= Mid-Range; L = Long-Range; D = Deferred



## Central Georgia HPC 6 Corridor Management Plan

**Table 4.1: Project Phases and Cost Estimates (cont'd.)**

MAP CODE	MAIN ROUTE	COUNTY	PROJECT DESCRIPTION	POTENTIAL FUNDING SOURCE <sup>1</sup>	COST ESTIMATE	PHASE <sup>2</sup>
133	I-75	Dooly	Widen I-75 from six to eight lanes throughout Dooly County	IM, STP, or NHS	\$60,801,520	D
134	I-16	Effingham	Widen I-16 from four to six lanes throughout Effingham County	IM, STP, or NHS	\$11,835,970	D
138	I-95	Glynn	Widen I-95 from four to six lanes from US 82/17 to US 25	IM, STP, or NHS	\$ 73,316,672	D
143	I-185	Harris/ Muscogee	Widen I-185 from four to six lanes from MP 12 in Muscogee County to MP 19 in Harris County	IM, STP, or NHS	\$17,066,653	D
145	I-75	Houston	Widen I-75 from six to eight lanes throughout Houston County	IM, STP, or NHS	\$62,782,783	D
168	I-185	Muscogee	Widen I-185 or construct parallel facility east of I-185 connecting US 280 and US 80	IM, STP, or NHS	\$215,817,000	D
169	I-185	Muscogee	Widen I-185 from four to six lanes from US 80 to north Muscogee County line	IM, STP, or NHS	\$15,900,614	D
179	I-75	Peach	Widen I-75 from six to eight lanes throughout Peach County	IM, STP, or NHS	\$45,968,564	D
Subtotal	(Deferred Interstate Projects)				\$794,024,920	
<b>TOTAL</b>					<b>\$2,030,695,190</b>	

<sup>1</sup> NCPD = National Corridor Planning and Development; IM = Interstate Maintenance; STP = Surface Transportation Program; NHS = National Highway System

<sup>2</sup> S = Short-Range; M = Mid-Range; L = Long-Range; D = Deferred



Long-range (2016-2025) projects in the HPC 6 Corridor would cost an estimated \$773 million to implement all improvements. Table 4.1 also includes Interstate widening projects with an estimated cost of \$794 million that will be further evaluated in conjunction with other Interstate projects as a part of the development of the Interstate System Plan (ISP). With the development of the ISP underway, the study team placed all Interstate widening projects into a category called “deferred”. The Interstate system deficiencies also indicated a predominant need for improvement in a north-south direction, which does not reflect the intent of HPC 6 to enhance the flow of freight in an east-west direction.

### **Funding Sources**

Potential funding sources for transportation investments proposed in the Central Georgia Corridor Study area are numerous. Projects identified within the 45-county study area that are located on or near HPC 6 are likely most competitive for discretionary funding from the NCPD Program. Many north-south improvements that will ultimately affect HPC 6, however, are less competitive for this funding source and will likely require traditional funding mechanisms. Other types of federal, state, and local funding, including National Highway System (NHS), Interstate Maintenance (IM), Bridge Replacement and Rehabilitation (BRR), Surface Transportation Program (STP), and Congestion Mitigation and Air Quality Improvement Program (CMAQ), are described in Appendix B.

### **Recommended Central Georgia HPC 6 Corridor Program**

From the projects identified in the study, a short list of those believed most competitive for NCPD funding was derived. Projects developed within the 45-county study area, but not on the HPC 6 mainline or within the vicinity of the Port of Savannah, were not considered strongly competitive for NCPD funding. As a result of narrowing the list to those considered most competitive for NCPD funding, seven key short-term projects remain.

The projects recommended for pursuit of NCPD funding are located in two general areas within the study area: SR 96 (Peach, Houston, and Twiggs Counties) and near the Port of Savannah. From the short-range package of projects identified as Map Code 148 in Table 4.1, four specific projects have been identified for NCPD short-term funding. In addition to these four projects, one project in Peach County plus two projects in Chatham County bring the total short-term list to seven NCPD projects as shown in Table 4.2.





**Table 4.2: Projects Recommended for NCPD Funding**

<b>Previous Map Code</b>	<b>Reference Number</b>	<b>Project Location and General Description</b>
148	NCPD 1	State Route 96/State Route 247 Intersection Improvements and Grade Separation, Houston County
148	NCPD 2	State Route 96 Turn Lanes, Houston County
148	NCPD 3	State Route 96/Moody Road Intersection Improvement, Houston County
148	NCPD 4	State Route 96/Norfolk Southern Railroad Grade Separation, Twiggs County
458	NCPD 5	Ft. Valley Bypass Extension Northeast of Fort Valley, Peach County
601	NCPD 6	Jimmy DeLoach Parkway Extension from SR 21 to SR 25, Chatham County
600	NCPD 7	Interstate 16/Dean Forest Road (SR 307) Interchange Improvement, Chatham County



### 5 Central Georgia HPC 6 Corridor Program

The study team selected seven specific projects critical to freight and military movement and most likely to be competitive for funding through the NCPD Program. Legislatively created as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the NCPD Program provides funding for planning, design, and construction of corridors which have been designated of national significance through their promotion of economic growth and international or interregional trade.

Eligibility for NCPD funding of project design, location studies, environmental documentation, and construction requires inclusion of the project in a corridor management plan. This document, the HPC 6 Corridor Management Plan for central Georgia, fulfills that requirement and supports GDOT's application for funding of the seven recommended projects.

#### Recommended NCPD Projects

Seven improvements, five along SR 96 between Fort Valley and I-16 and two near the Port of Savannah, are the focus of the short-range initiatives recommended for NCPD Program funding. Each project, shown in Figure 5.1, is described in detail below:

##### NCPD 1 - State Route 96/State Route 247 Intersection Improvements and Grade Separation, Houston County (Figures 5.2A and 5.2B)

A grade separation would be provided at SR 96 and SR 247 (US 129), with the SR 96 roadway passing over the Norfolk Southern Railroad and SR 247. To facilitate turning movements, a "jug handle" interchange would be created to the east of SR 247, allowing full access between the two roads. The east and southeast portion of the jug handle would be on existing Church Road while the northeastern portion would be on new

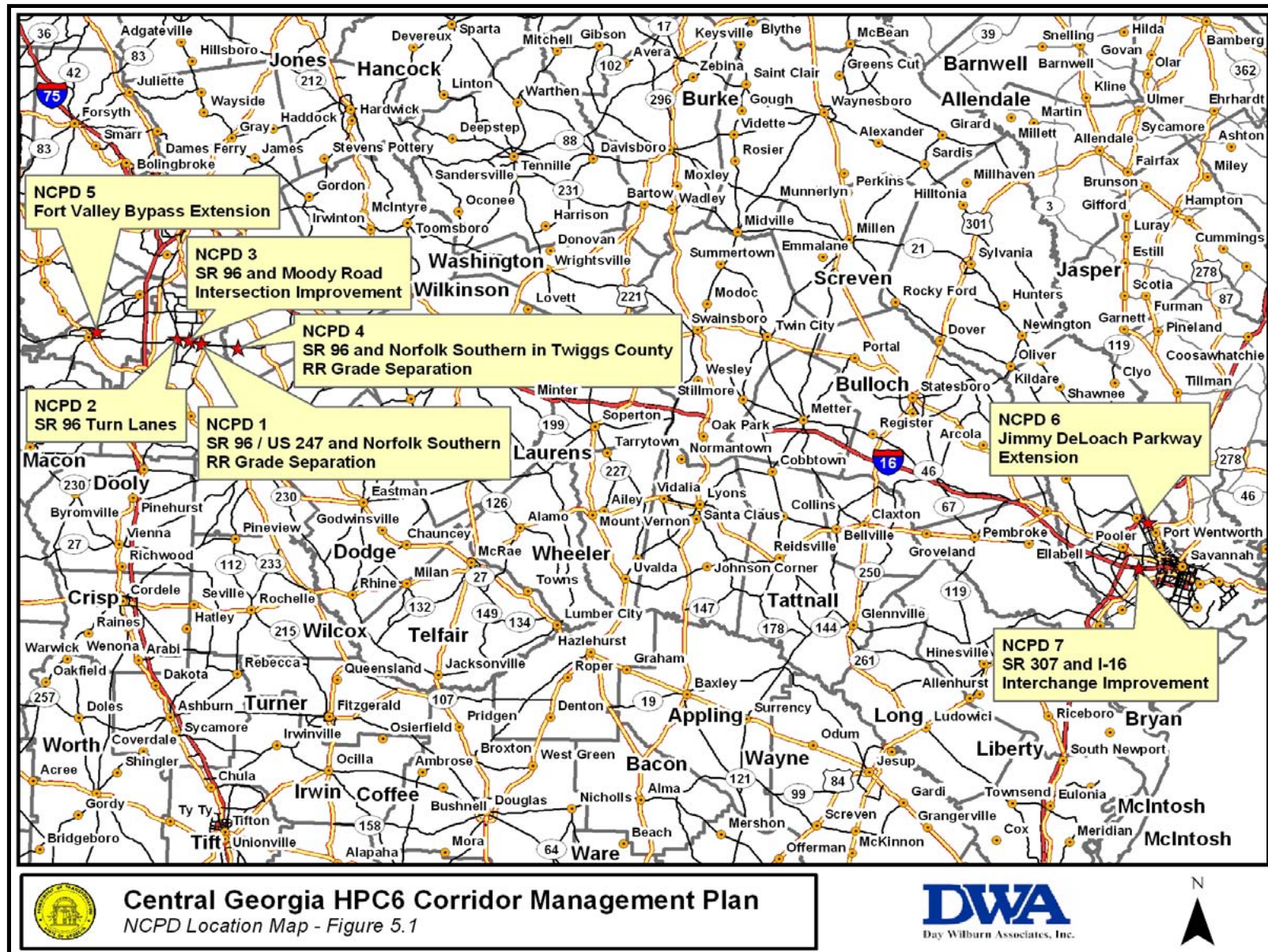
location. SR 96 would be relocated slightly to the south of the existing roadway so that existing SR 96 could be used during construction of the grade separation. Church Road would also be relocated slightly to "T" into the jug handle.

##### NCPD 2 - State Route 96 Turn Lanes, Houston County (Figure 5.3)

Turning movements cause considerable congestion along SR 96 in Houston County. Therefore, left turn lanes are proposed at the high school and middle school, Kersey Road, Mt. Zion Road, Bonanza Drive, Cartwright Drive, and Old Perry Road.



Figure 5.1: NCPD Project Location Map





## Central Georgia HPC 6 Corridor Management Plan

### NCPD 3 - State Route 96/Moody Road Intersection Improvement, Houston County (Figures 5.4A and 5.4B)

Additional lanes to accommodate intersection turning movements are proposed. Currently, there are two lanes on each road through the intersection with no turn lanes. The project widens both roads to five lanes, beginning the taper about 855-feet away from the intersection. Two lanes in each direction would be through lanes or right turn lanes. A center turn lane would be provided on all four legs of the intersection.

### NCPD 4 - State Route 96/Norfolk Southern Railroad Grade Separation, Twiggs County (Figures 5.5A and 5.5B)

Railroad at-grade intersections pose a safety concern and create localized traffic congestion. A grade separation at the SR 96/NSRR junction would provide a solution to this problem.

### NCPD 5 - Fort Valley Bypass Extension Northeast of Fort Valley, Peach County (Figures 5.6A and 5.6B)

The existing Fort Valley Bypass (SR 49C) leaves SR 96 west of town and intersects with SR 49 north of town. Since considerable congestion and turning movements occur in Fort Valley, a solution would be extending the northern Fort Valley Bypass from SR 49 eastward to SR 96 east of town. The roadway would be constructed on new location with right-of-way for four lanes. At this time, two lanes are proposed.

### NCPD 6 - Jimmy DeLoach Parkway Extension from SR 21 to SR 25, Chatham County (Figures 5.7A and 5.7B)

Jimmy DeLoach Parkway provides an important connection from I-16 and I-95 to SR 21. To improve access to the Port of Savannah, this four-lane route would need to be extended providing two lanes from SR 21 to SR 25. This new location road would align with existing SR 25 to the south. The SR 25 connection to the northeast would “T” into the new roadway. Most traffic will depart from Jimmy DeLoach Parkway at SR 25 making a two-lane extension suitable for freight movement to SR 25 and the port. Right-of-way for four lanes should be acquired and traffic should be periodically monitored to determine the need for a widening to four lanes in the future.

### NCPD 7 - Interstate 16/Dean Forest Road (SR 307) Interchange Improvement, Chatham County (Figures 5.8A and 5.8B)

Dean Forest Road (SR 307) provides the most direct truck connection to the Port of Savannah from I-16. The Dean Forest Road/I-16 interchange is one of the highest accident locations in the City of Savannah. Existing ramps are relatively short, and sometimes queues of eastbound trucks exiting at SR 307 extend onto the through lanes of I-16. Longer entrance and exit ramps are needed to handle existing and future traffic



## Central Georgia HPC 6 Corridor Management Plan

volumes. Several of the traffic movements are heavy, and directional ramps may be needed to more effectively handle future traffic volumes. Since this interchange is a gateway to the Port of Savannah, a high capacity interchange configuration is preferred to make access to the port as efficient as possible. Improved access would be achieved by eliminating the existing diamond interchange and replacing it with a half-cloverleaf design. Eastbound traffic would exit from I-16 onto SR 307 using a traditional half-diamond ramp that is longer than the existing one. Westbound traffic from I-16 onto SR 307 would also exit in this manner. Southbound traffic on SR 307 would use a half-cloverleaf type ramp to enter I-16 east, with the same type of ramp used by northbound traffic leaving SR 307 to I-16 west.

A general description and cost estimate for each project is shown in Table 5.1. Appendix D includes a project description, need and purpose statement, detailed cost estimate and concept sketch for each project.

**Table 5.1: NCPD Projects and Cost Estimates**

Reference Number	Project Location and General Description	Cost Estimate
NCPD 1	State Route 96/State Route 247 Intersection Improvements and Grade Separation, Houston County	\$21,128,483
NCPD 2	State Route 96 Turn Lanes, Houston County	\$801,676
NCPD 3	State Route 96/Moody Road Intersection Improvement, Houston County	\$8,755,697
NCPD 4	State Route 96/Norfolk Southern Railroad Grade Separation, Twiggs County	\$2,237,343
NCPD 5	Ft. Valley Bypass Extension Northeast of Fort Valley, Peach County	\$16,061,847
NCPD 6	Jimmy DeLoach Parkway Extension from SR 21 to SR 25, Chatham County	\$15,137,043
NCPD 7	Interstate 16/Dean Forest Road (SR 307) Interchange Improvement, Chatham County	\$27,774,440
<b>Total</b>		<b>\$91,896,529</b>

The seven projects, as a recommended NCPD implementation program, demonstrate a regionally connected freight movement need and purpose. SR 96 between Fort Valley and Warner Robins is a part of the STAA Network and National Highway System, with connections to STRAHNET designated roadway sections (for maps see Appendix C). The roadway is important for military transport as well as routine freight movement. The HPC 6 Corridor along SR 96 shows congestion, now and in the future. The current v/c ratio is 0.76, above the standard for acceptable congestion for the HPC 6 Corridor. By 2025, congestion reflected through an estimated v/c ratio of 1.26, will be extreme. Although SR 96 in Houston County is a designated truck (STAA) route, the roadway statistics show that only 2% of the current traffic on the roadway is truck traffic. This may be the result of the congestion and rapid development in the area, causing



## Central Georgia HPC 6 Corridor Management Plan

significant congestion which likely deters freight-moving trucks from using this more direct connection between I-75 and I-16. However, if the SR 96 improvements were in place by 2025, transportation models indicate that freight traffic would actually be drawn to use this route between I-75 and I-16 instead of taking I-75 northward to Macon and connecting with I-16 there. Transportation models predicted that improvements along SR 96, particularly in Houston and Twiggs Counties, would have a dramatic effect on regional transportation patterns by improving travel time between I-75 and the Port of Savannah.

The Port of Savannah is a major port of debarkation for military goods and personnel and is also the fourth busiest freight handling port in the country. The existing Jimmy DeLoach Parkway in Chatham County provides increased access to the Port of Savannah by serving as an important connection from I-16 and I-95 to SR 21 and ultimately to the port. The extension of the parkway would allow trucks to proceed to SR 25, providing more direct access to the Port of Savannah. Ease of access to the port by military and freight carriers is important to both our national defense and national economy.

Dean Forest Road (SR 307) in Chatham County provides another main connection from I-16 to the Port of Savannah. With between 10% and 20% trucks on the roadway, it is a major truck route. The existing I-16/Dean Forest Road interchange is insufficient for the number of vehicles entering onto Dean Forest Road from the Interstate. Improving the interchange would facilitate the efficient movement of freight from the Interstate system to the Port of Savannah.

### Next Steps

GDOT will utilize the package of NCPD recommended projects to compete with other high priority corridors for NCPD funding. While the requirements for NCPD related funds may change under future federal transportation legislation, GDOT's need and purpose based approach for requesting NCPD funds through Georgia's Congressional delegation will provide a competitive edge for Georgia's pursuit of NCPD funding.





Figure 5.2 A: NCPD 1 Location Map

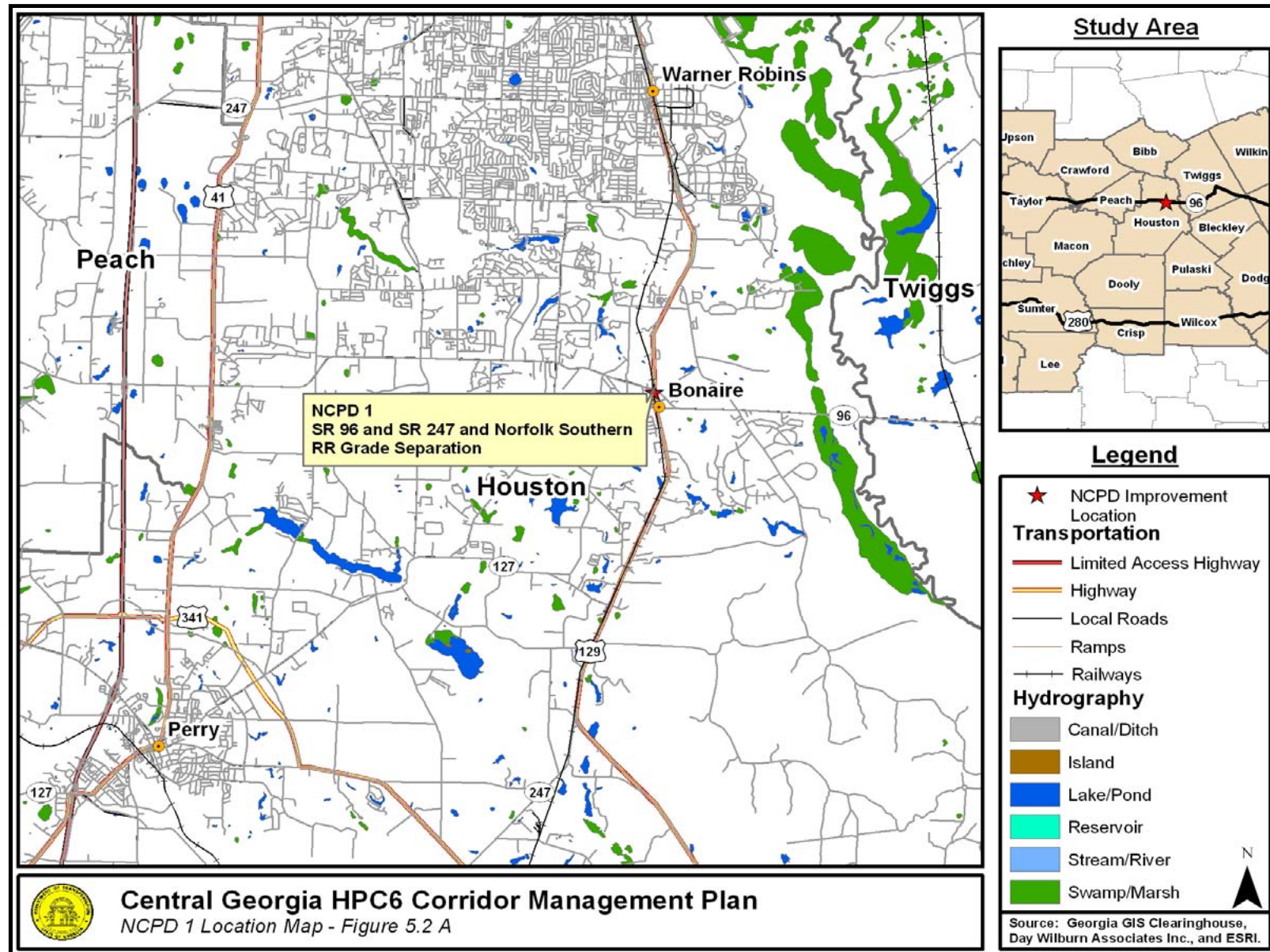




Figure 5.2 B: NCPD 1 Concept Sketch

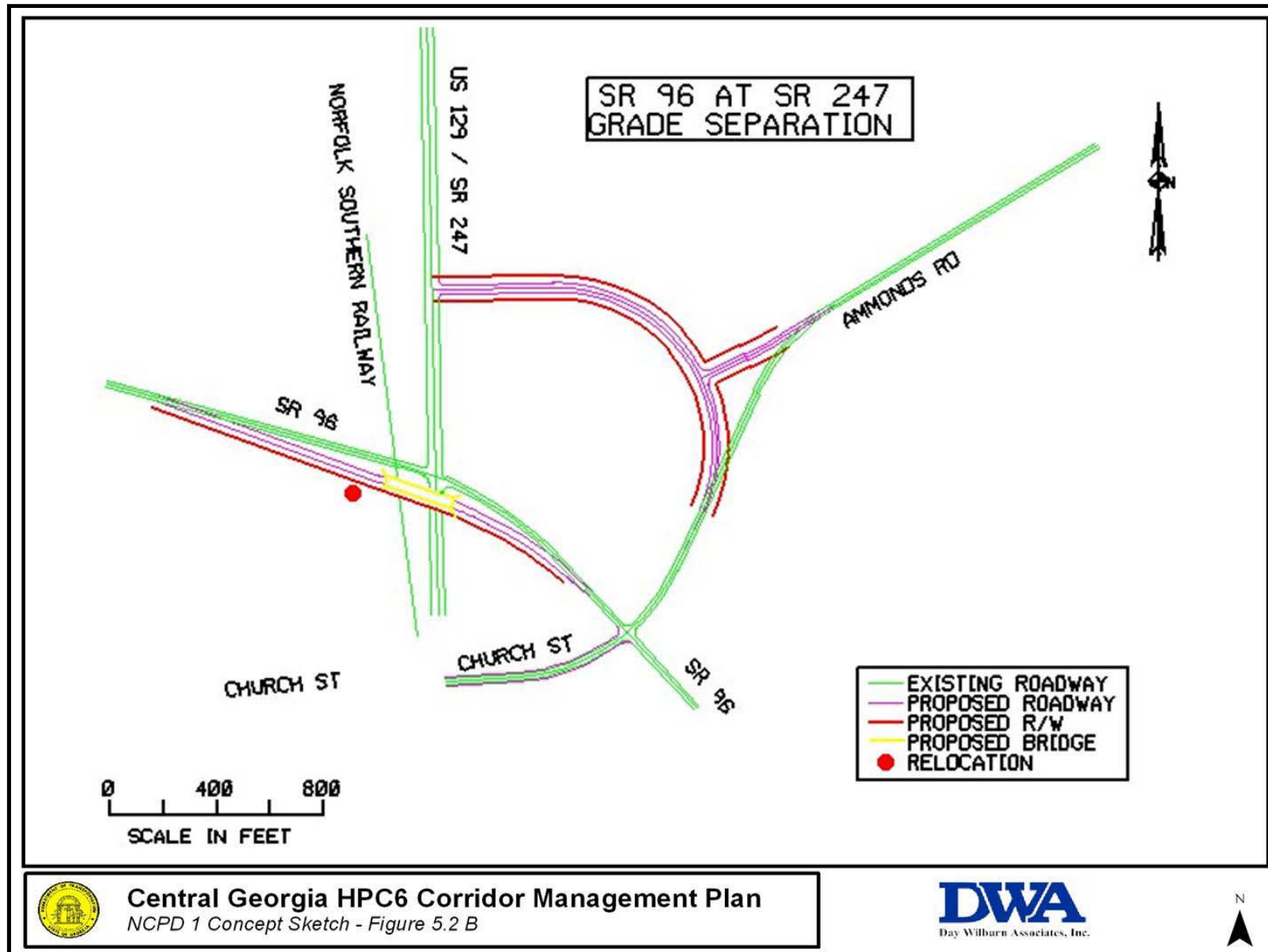




Figure 5.3: NCPD 2 Location Map

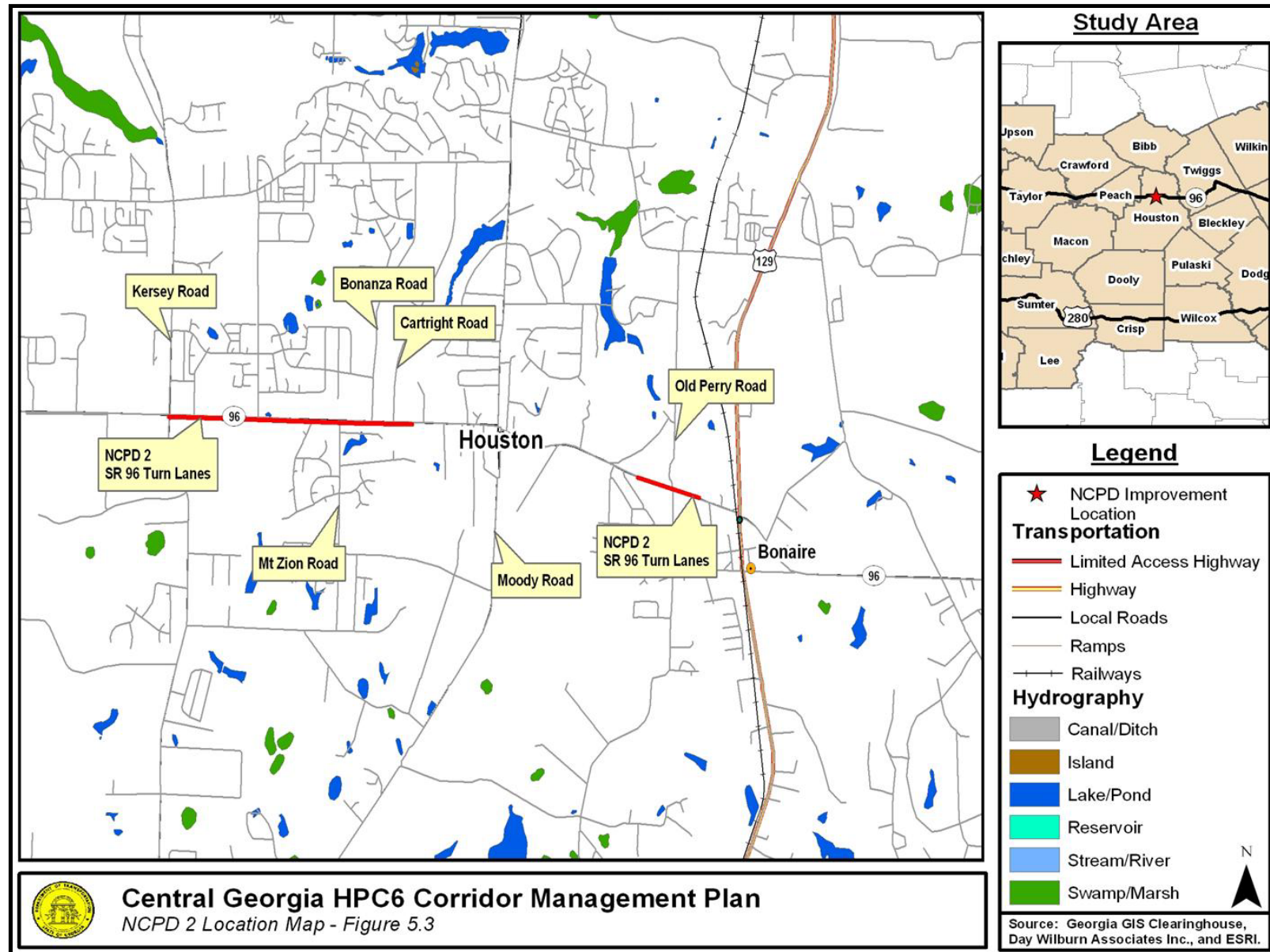






Figure 5.4 A: NCPD 3 Location Map

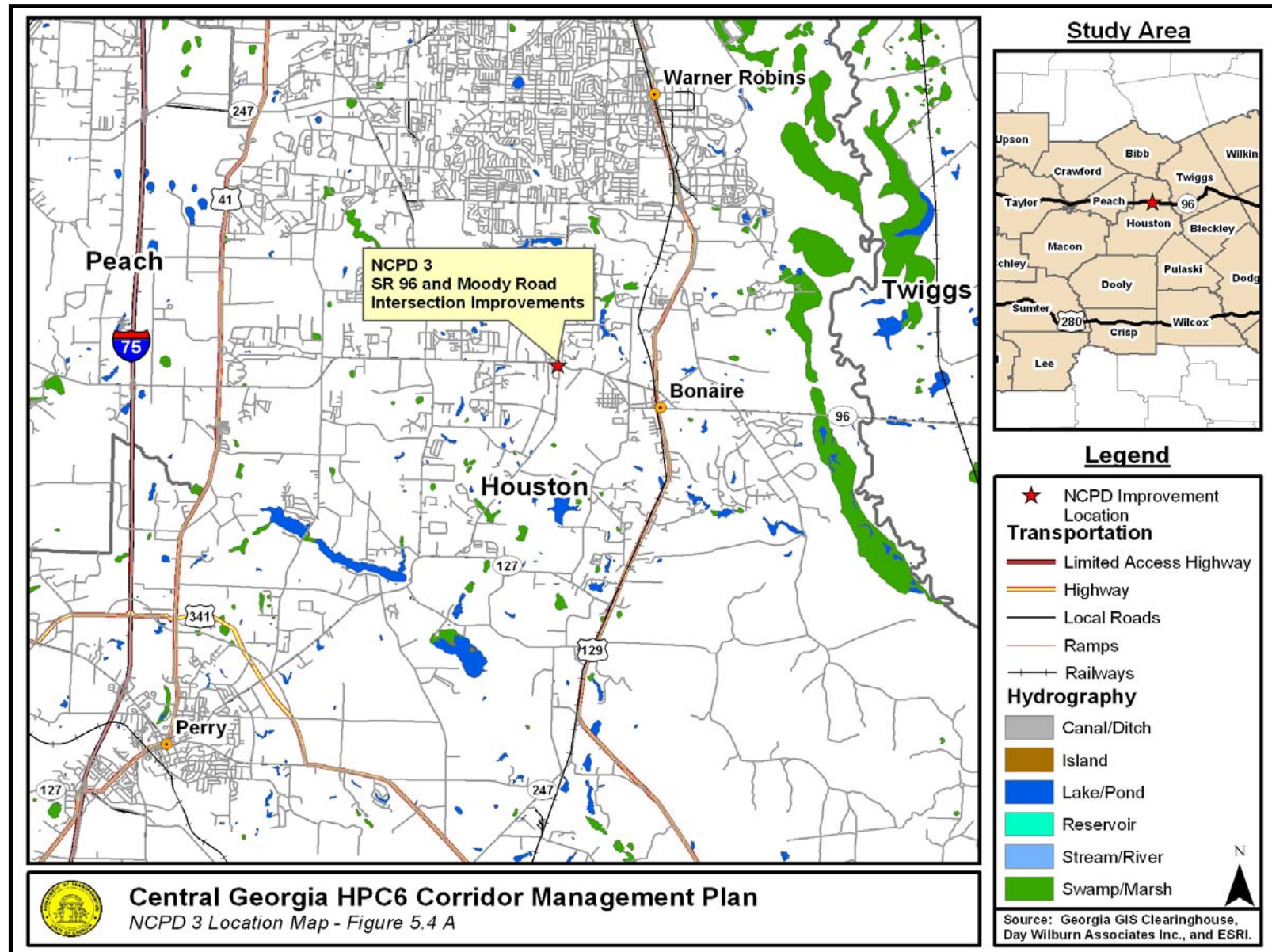




Figure 5.4 B: NCPD 3 Concept Sketch

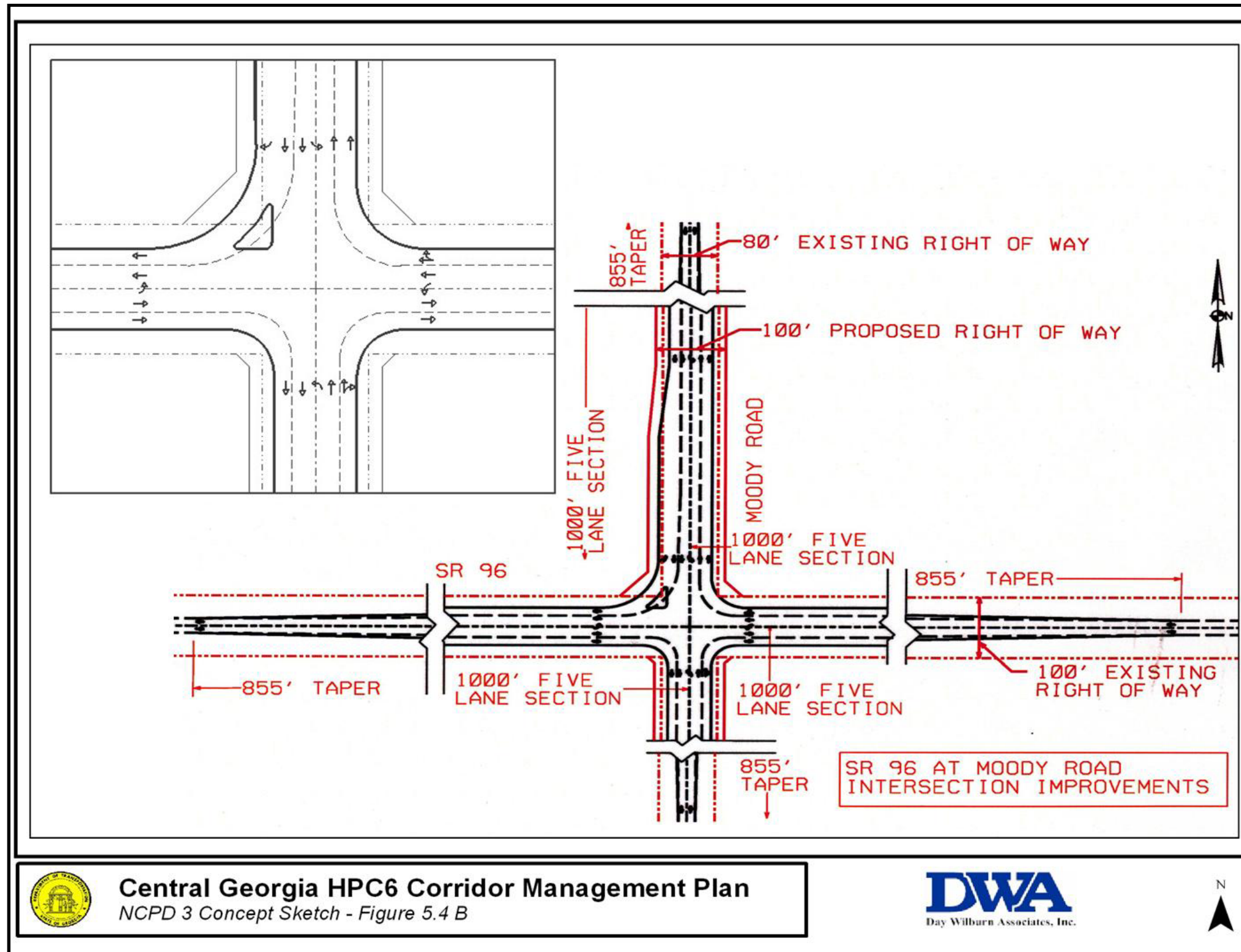






Figure 5.5 A: NCPD 4 Location Map

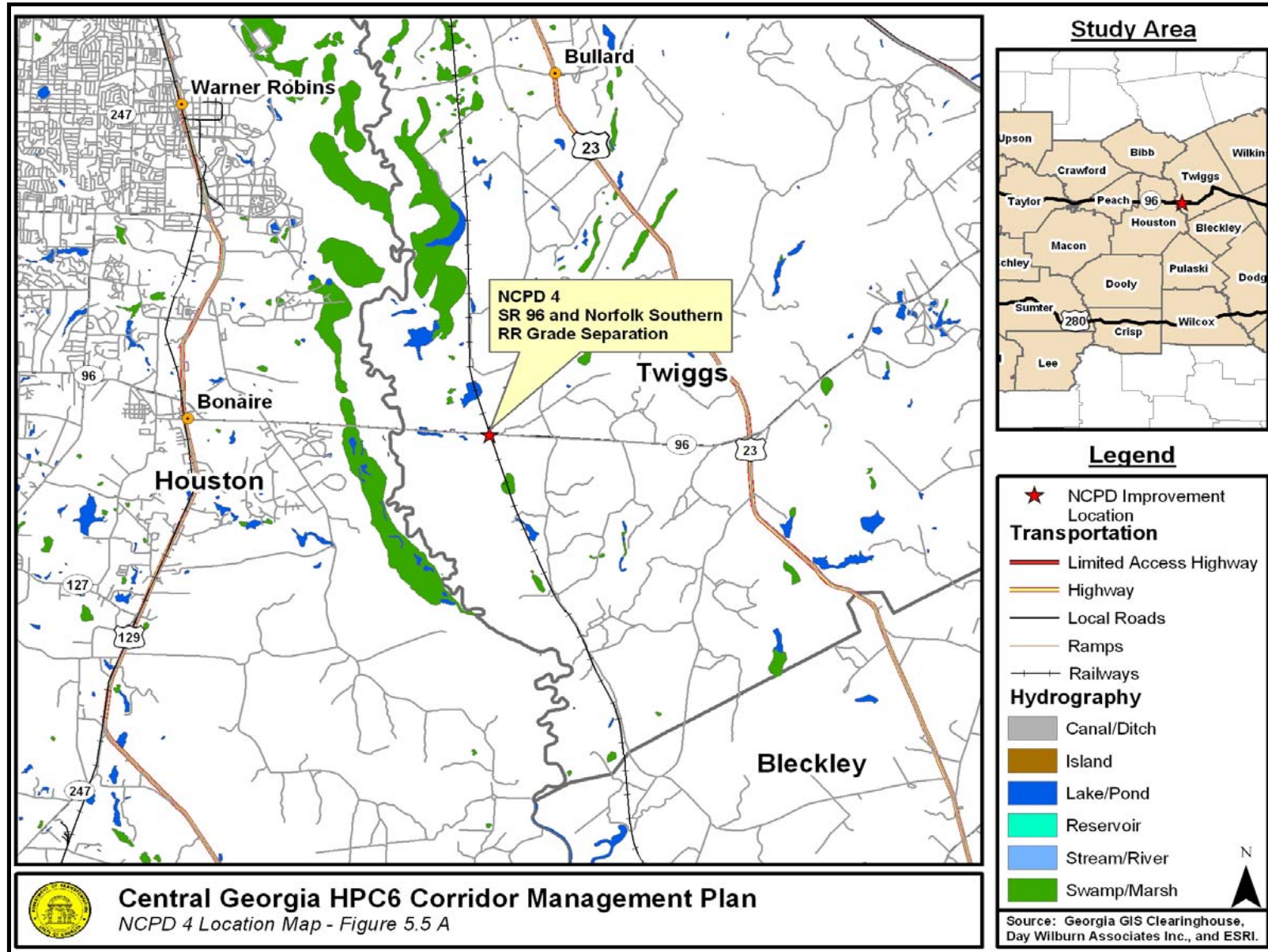






Figure 5.5 B: NCPD 4 Concept Sketch

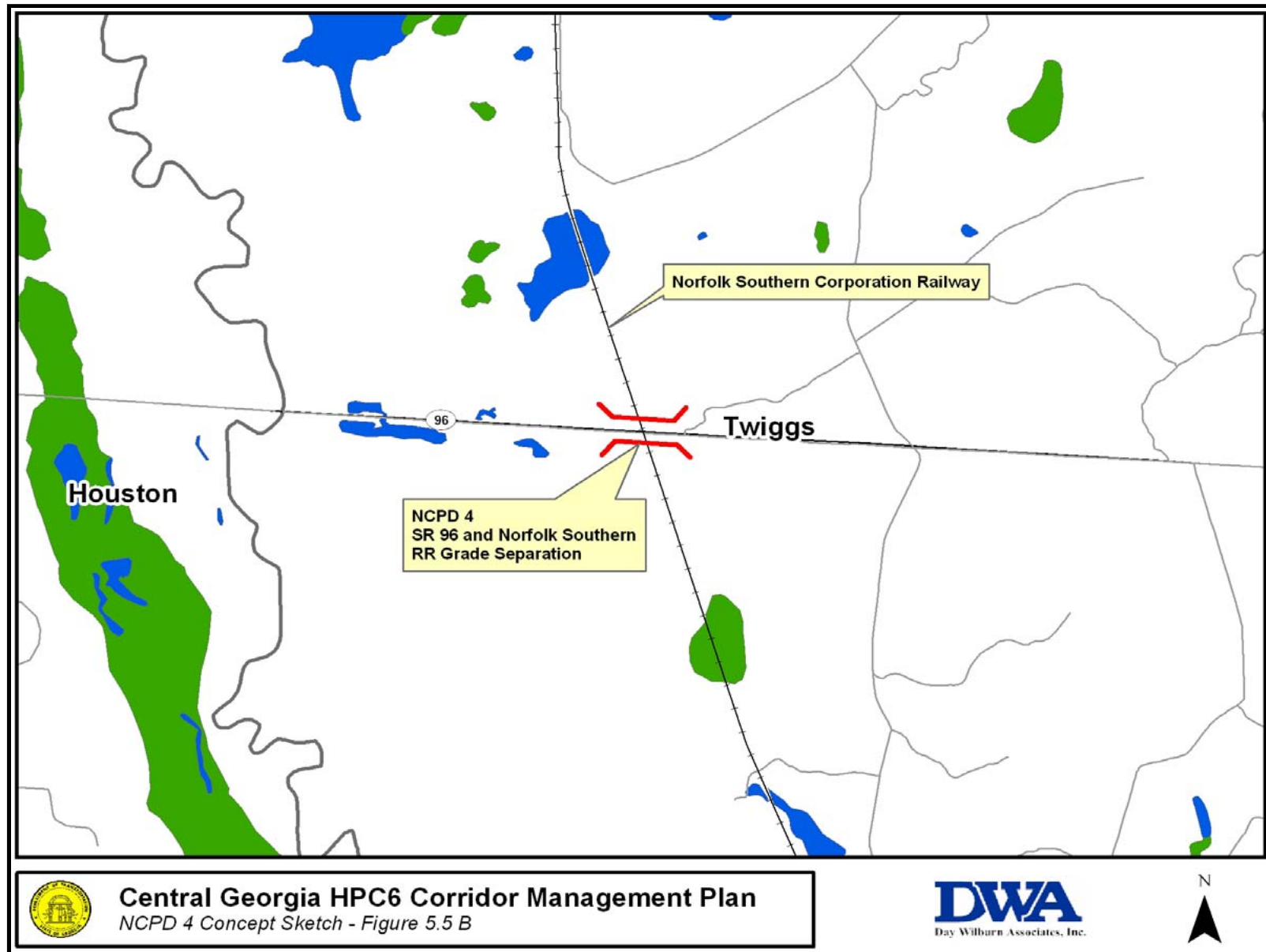




Figure 5.6 A: NCPD 5 Location Map

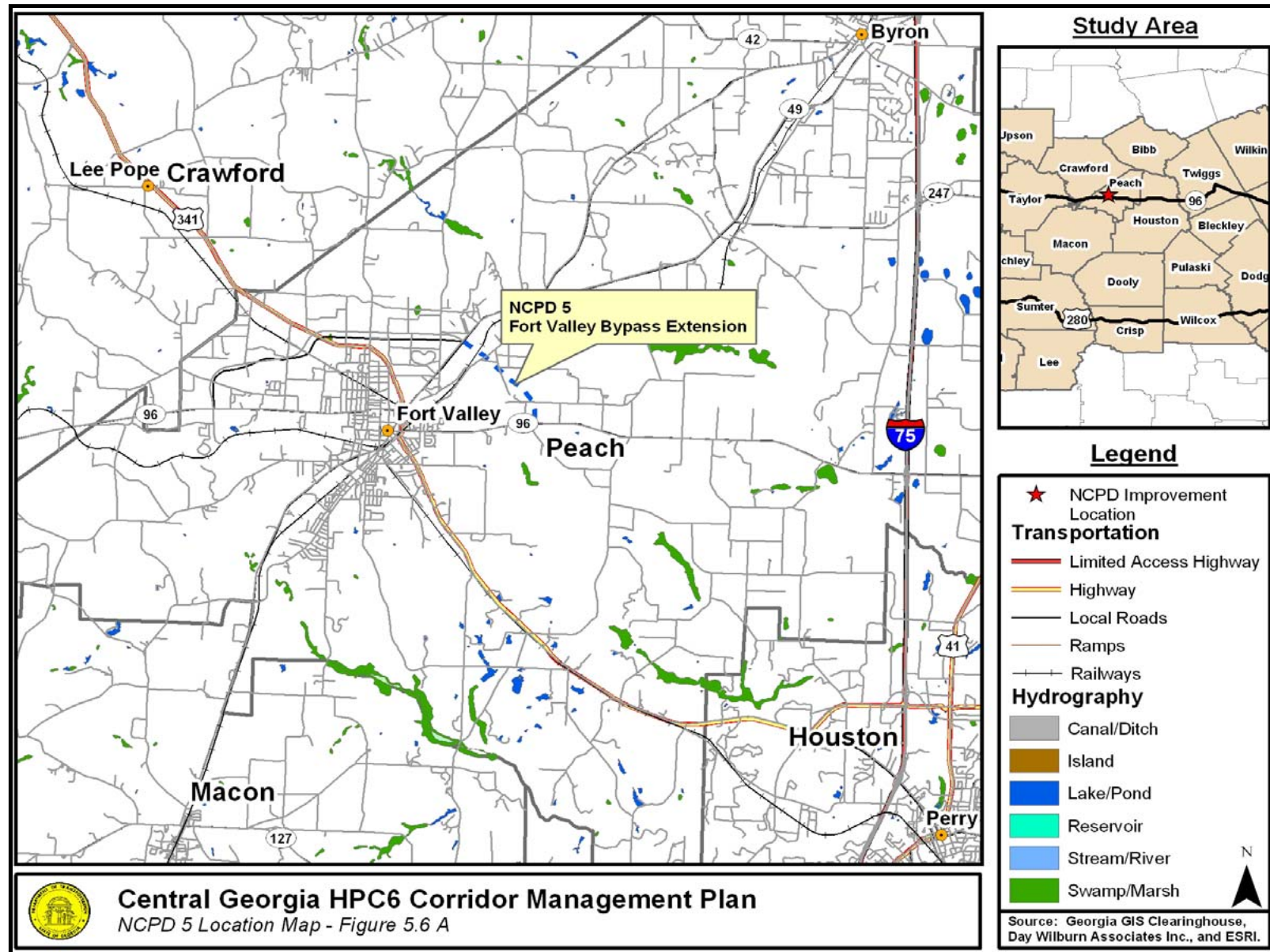




Figure 5.6 B: NCPD 5 Concept Sketch

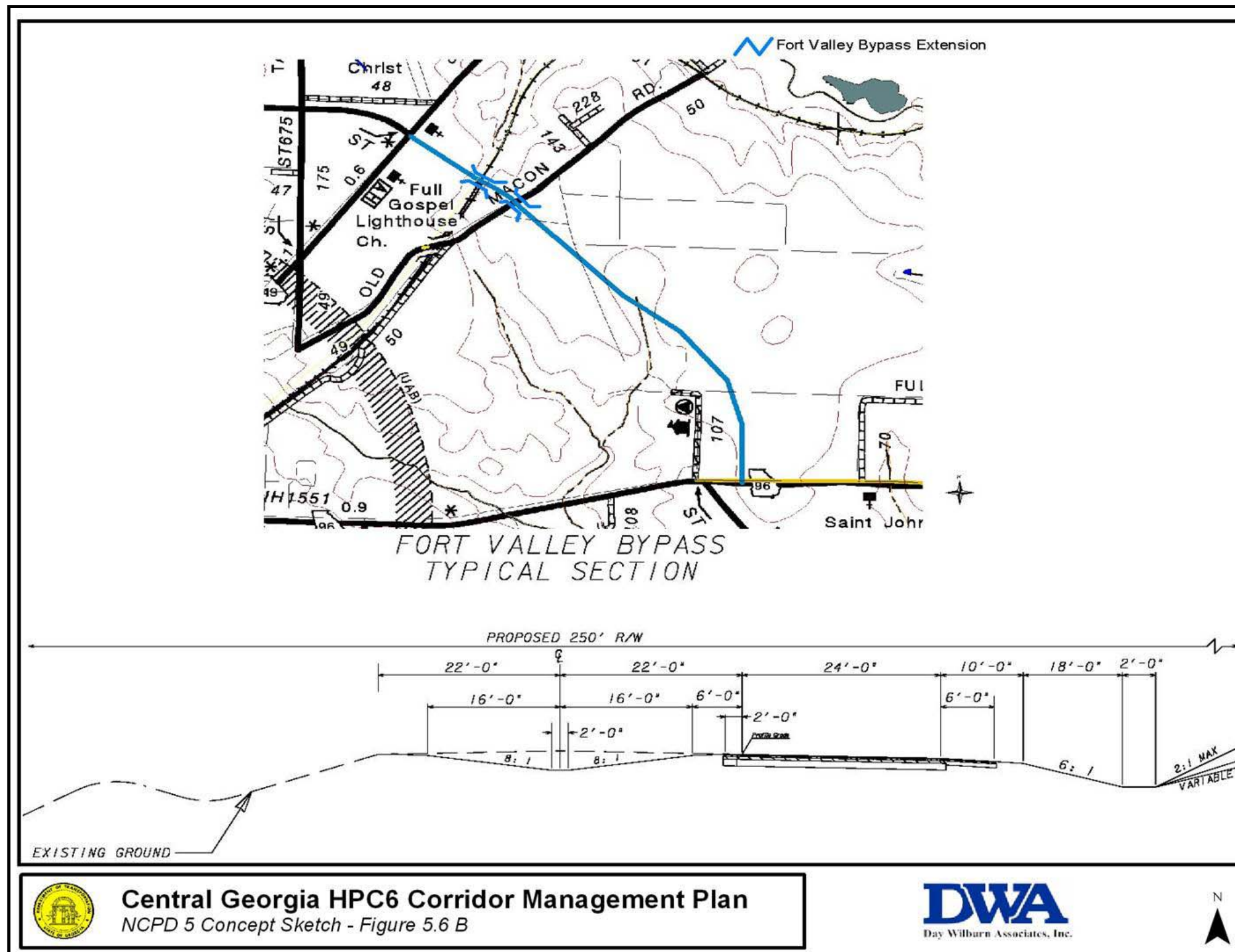






Figure 5.7 A: NCPD 6 Location Map

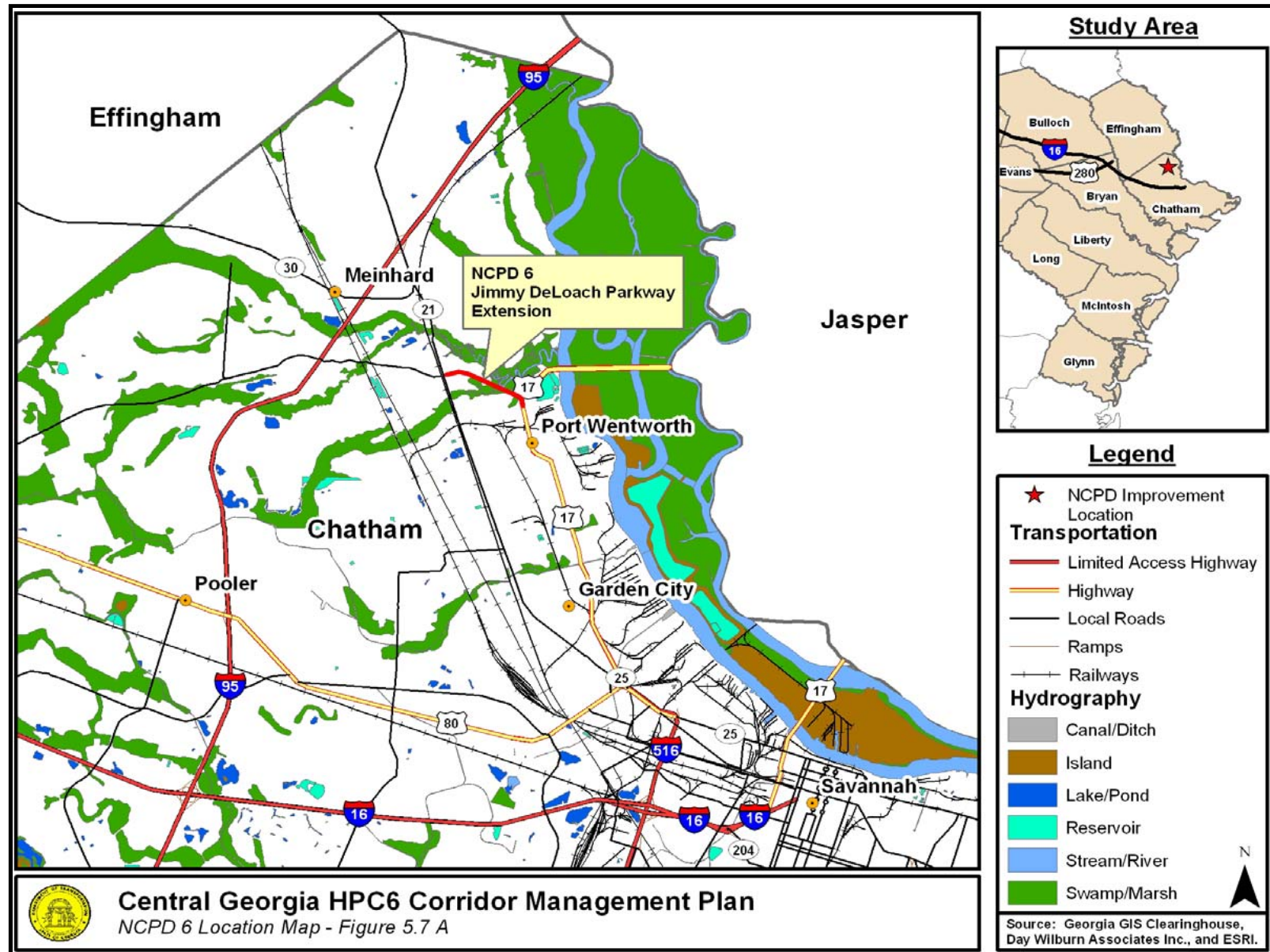


Figure 5.7 B: NCPD 6 Concept Sketch

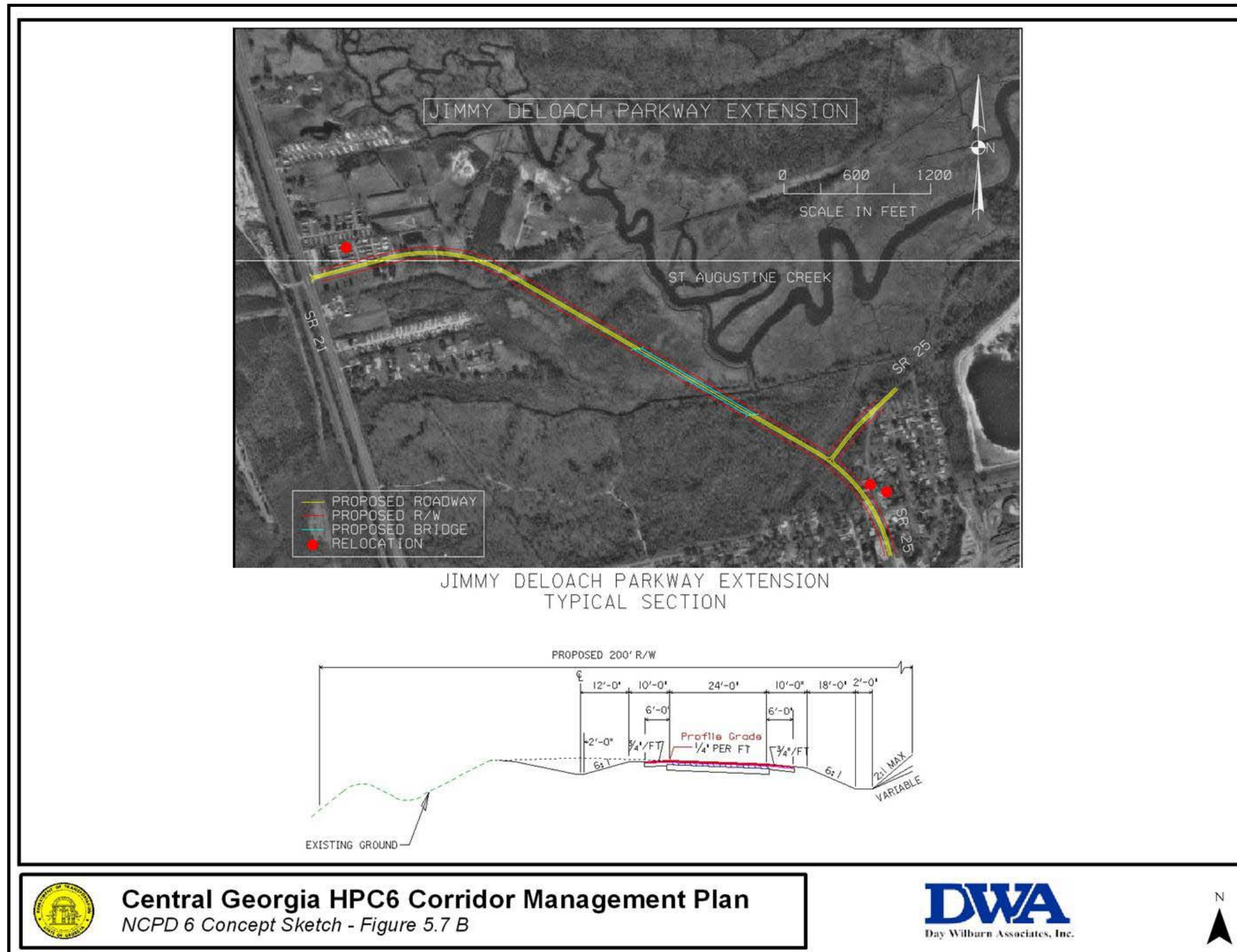






Figure 5.8 A: NCPD 7 Location Map

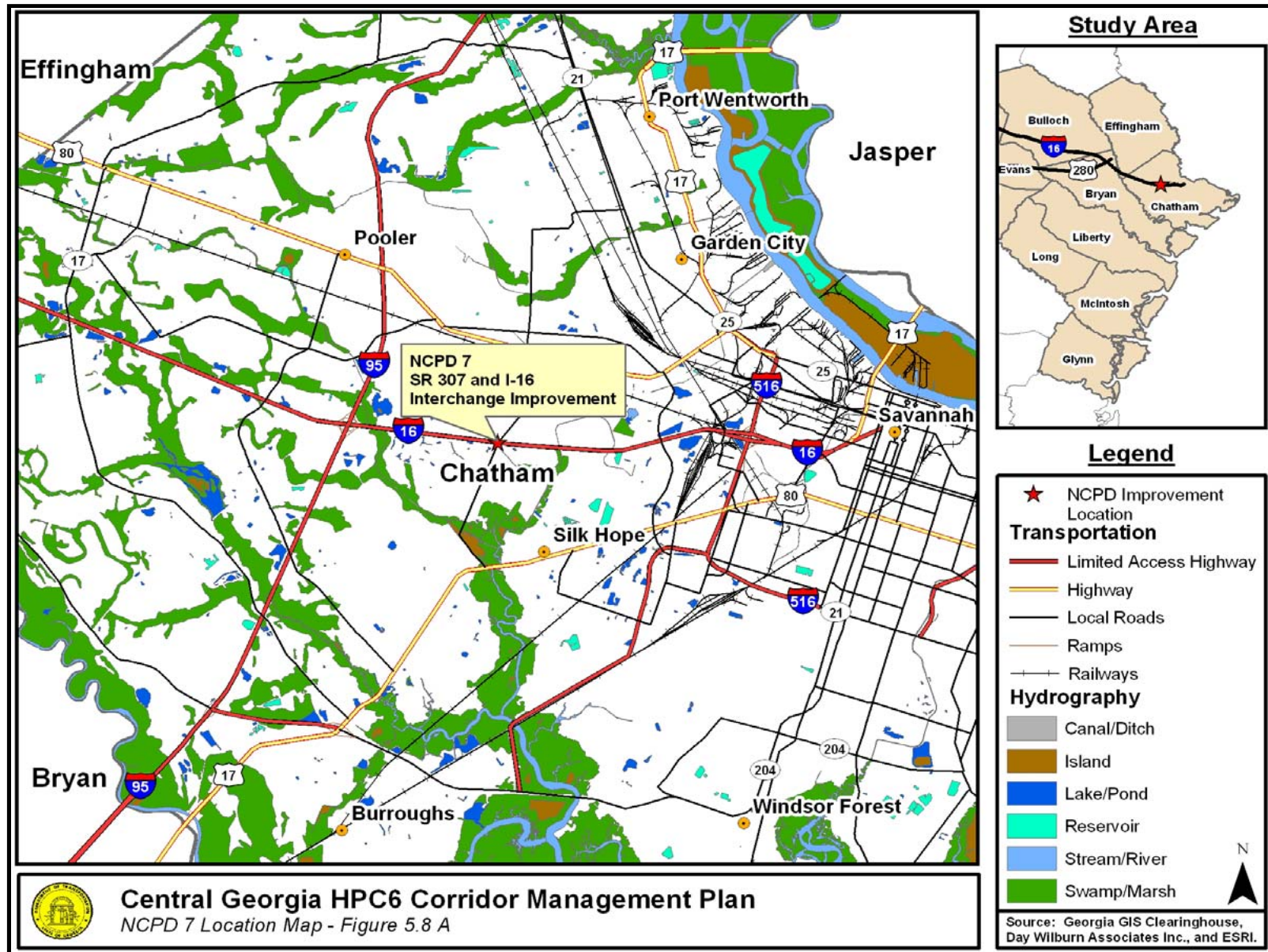
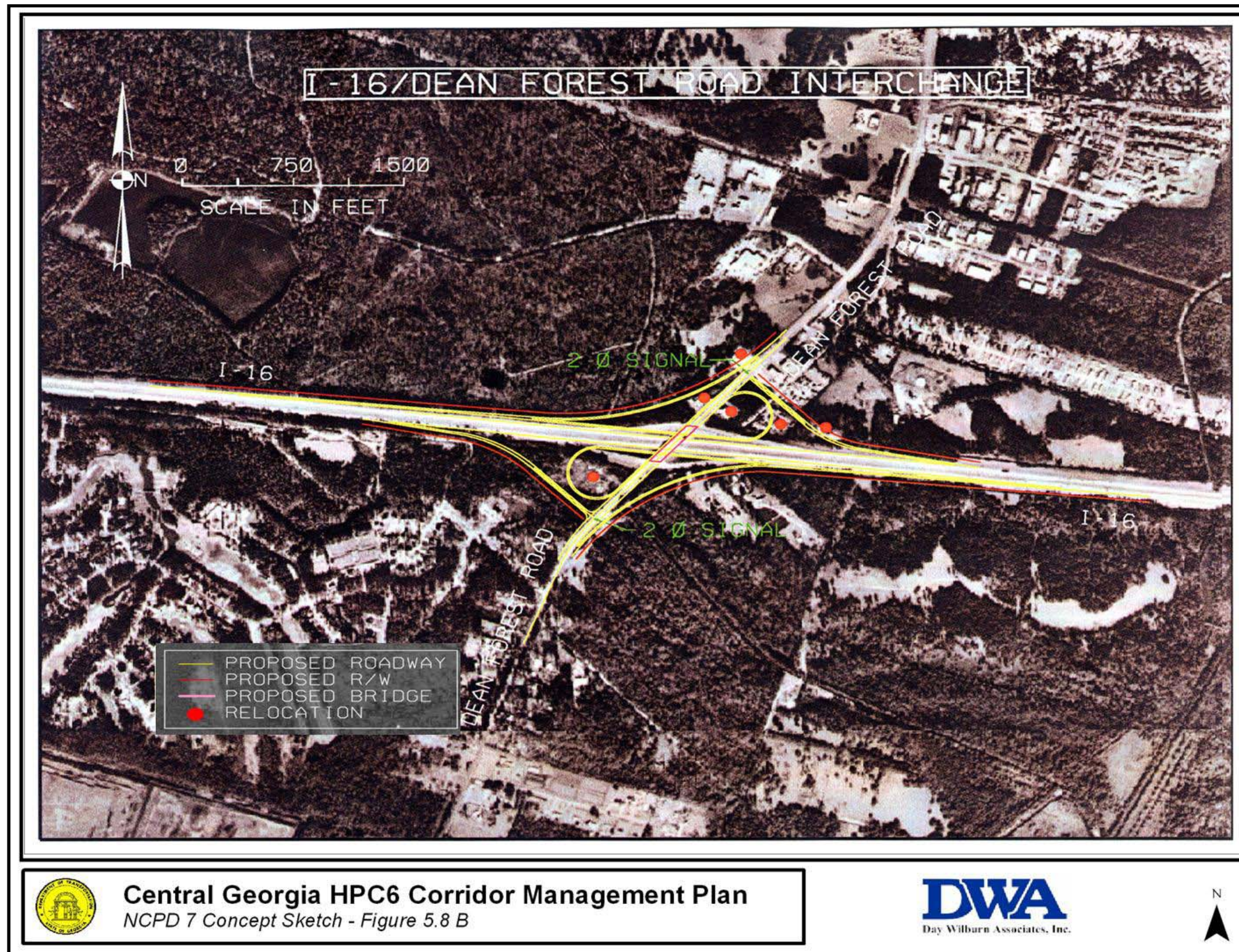






Figure 5.8 B: NCPD 7 Concept Sketch







# **APPENDIX A**

## **PROJECT WORKSHEETS**



### Introduction

The following appendix contains worksheets for 34 projects located in the Central Georgia Corridor (see table below for Appendix A contents). Each worksheet contains a need and purpose statement, project description, location and environmental resource map, photograph of the project corridor, design and construction issues, environmental issues, and initial cost estimate. A typical section is provided for most projects, with the exception of proposed freeway/frontage road and interchange locations. Design and construction issues are noted, based on field observations, with each worksheet containing slightly modified information based on the conditions present in the field. In general, utilities are listed only if their presence is more significant than standard roadside utilities. The presence of utilities including powerlines crossing above the road, electrical substations, significant interchange lighting, transmission lines, and gas pipelines are noted as observed in the field.

Constructability issues including erosion control, staging, drainage, and traffic control are generally not addressed in the project worksheets. These issues will need to be documented during project development.



## Central Georgia HPC 6 Corridor Management Plan

Tab Number	Main Route	County	General Project Location/ Description
1	SR 307/ I-16	Chatham	SR 307 (Dean Forest Road)/I-16 interchange improvement
2	New Location	Chatham	Jimmy DeLoach Parkway Extension from SR 21 to SR 25
3	SR 96	Houston	Phase 1-5: Improvements in Peach, Houston, and Twiggs County
4	SR 96	Peach	Connect Fort Valley Bypass (SR 49C) to SR 96 east of Fort Valley connecting existing bypass to SR 96
5	SR 49	Bibb	Widen SR 49 from five lanes to six-lane divided from Maynard Street to New Clinton Road
6	US 41	Bibb	Widen US 41 from five lanes to six-lane divided between US 129 and I-75
7	US 301 BYPASS	Bulloch	Widen US 301 from two lanes to four-lane divided from US 80 to SR 67
8	SR 204	Chatham	Reconstruct SR 204 from four-lane arterial to six-lane freeway from US 17 to Veterans Parkway
9	SR 21 SPUR	Chatham	Widen SR 21 Spur from two to five lanes from SR 25 E to end of road
10	SR 119	Liberty	Widen the common part of SR 119 and SR 196 from four to six lanes
11	US 80	Muscogee	Widen US 80 from the Alabama State line to I-185 from four to six lanes
12	US 129	Bibb	Widen US 129 from four to six lanes from .5 miles north of SR 49 to .5 miles north of North Graham Road and widen US 129 from six to eight lanes from US 23 to .5 miles north of SR 49
13	US 41	Bibb	Widen US 41 between Houston Road and US 129 from 6 to 8 lanes
14	US 23	Bibb	Widen US 129 from six to eight lanes from I-16 EB exit ramp to US 23/ Emery Hwy.
15	US 129	Bibb	Widen US 129 from four lanes to six-lane divided from south Bibb County line to SR 41
16	SR 21	Chatham	Reconstruct Derenne Avenue from I-516 to Truman Parkway as a four-lane freeway with interchange at Abercorn and Truman Parkway
17	SR 25	Chatham	Widen SR 25 from five lanes to six-lane divided from SR 25C to SR 21 Spur
18	US 129	Houston	Widen US 129 from five lanes to six-lane divided from SR 247 C to SR 96



## Central Georgia HPC 6 Corridor Management Plan

Tab Number	Main Route	County	General Project Location/ Description
19	US 27	Muscogee	Construct four-lane freeway with four-lane frontage road on US 27/US 280 from Alabama State line to 1.5 miles east of I-185
20	I-75	Bibb	Widen I-75 from six to eight lanes from south Bibb County line to I-475
21	I-16	Bryan	Widen I-16 from four to six lanes from east Bryan County line to US 280
22	I-95	Bryan	Widen I-95 from six to eight lanes one mile south of US 17 to north Bryan County line
23	I-16	Chatham	Widen I-16 from four to six lanes throughout Chatham County and reconstruct I-16/I-95 interchange and I-16/I-516
24	I-516	Chatham	Widen the entire I-516 corridor from four to six lanes
25	I-95	Chatham	Widen I-95 from six to eight lanes throughout Chatham County
26	I-75	Crisp	Widen I-75 from four to eight lanes throughout Crisp County
27	I-75	Dooly	Widen I-75 from six to eight lanes throughout Dooly County
28	I-16	Effingham	Widen I-16 from four to six lanes throughout Effingham County
29	I-95	Glynn	Widen I-95 from four to six lanes from US 82/17 to US 25
30	I-185	Harris/ Muscogee	Widen I-185 from four to six lanes from MP 12 in Muscogee County to MP 19 in Harris County
31	I-75	Houston	Widen I-75 from six to eight lanes throughout Houston County
32	I-185	Muscogee	Widen I-185 or construct parallel facility east of I-185 connecting US 280 and US 80
33	I-185	Muscogee	Widen I-185 from four to six lanes from US 80 to north Muscogee County line
34	I-75	Peach	Widen I-75 from six to eight lanes throughout Peach County





# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

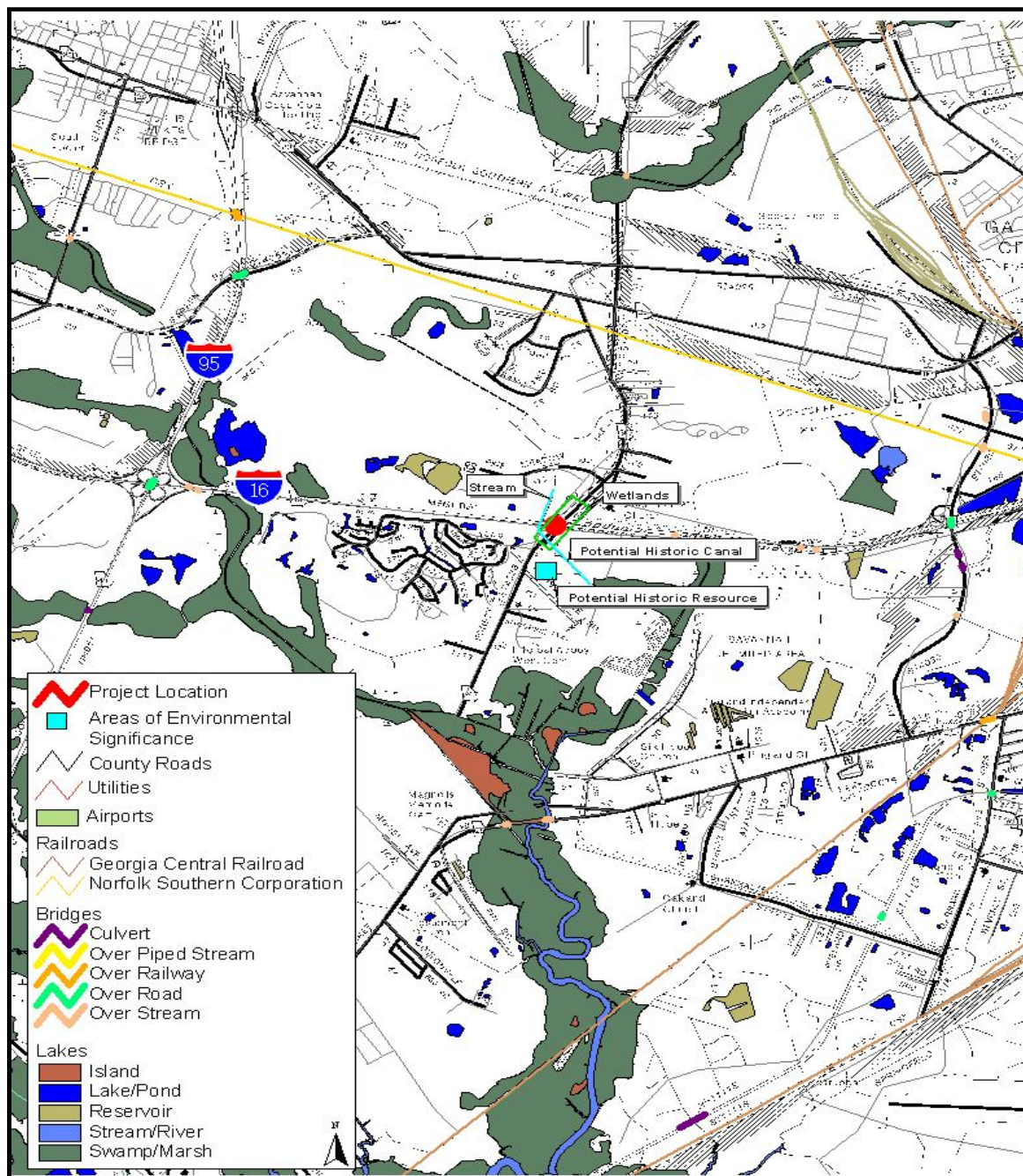
<b>NEED AND PURPOSE:</b>  <p>The purpose of the project is to improve access to the Port of Savannah. A high capacity interchange configuration is preferred to make access to the Port as efficient as possible. SR 307 (Dean Forest Road) provides the most direct truck connection to the Port of Savannah from I-16. The Dean Forest Road/I-16 interchange is one of the highest accident locations in the City of Savannah. This segment of roadway is classified as an urban interstate. The 3 year accident rate from 1995-1997 for this segment is 348 as compared to the statewide average of 174 for urban interstates. Existing ramps are relatively short, and sometimes queues of eastbound trucks exiting at SR 307 extend onto the through lanes of I-16. Longer entrance and exit ramps are needed to handle existing and future traffic volumes.</p> <p>Several of the traffic movements are heavy, and directional ramps may be needed to more effectively handle future traffic volumes.</p>				County		Chatham	
				Map Code		600	
				Route #		I-16	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		0.09 mile	
				Mileposts			
From:				To:			
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	No	
Traffic Vol.:	17,000	43,000	1995-1997 3 year Accident Rate	348 urban interstate			
Truck %:	20%	30%	% Increase in Travel Speed	20%	% Increase in Capacity	150%	
No. of Lanes			% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  <p>Reconstruct SR 307/I-16 interchange with longer entrance and exit ramps and directional ramps as necessary.</p>							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Eng.	NCPD	\$954,000
Right-of-Way	NCPD	\$15,563,000
Utilities	Local	\$763,000
Construction	NCPD	\$10,494,000
<b>Project Cost</b>		<b>\$27,774,000</b>

### Location and Environmental Resource Map







## Concept Sketch Design





## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Speed Design	35 mph on ramps, 45 mph on SR 307, 70 mph on I-16	35 mph on ramps, 45 mph on SR 307, 70 mph on I-16
Additional Design Criteria		Minimum 1600 foot ramps; Consider Parclo A interchange configuration
Observed Substandard Design Features	Ramps are too short	Minimum 1600 foot ramps; Consider Parclo A interchange configuration
Observed Safety Concerns	Queue from eastbound exit ramp extends onto I-16	Minimum 1600 foot ramps; Consider Parclo A interchange configuration
Pavement	Per GDOT Standards	PCC on ramp through lanes and shoulders
Signals	Two signals: one at each ramp terminal	Recommend interchange configuration with two phase (maximum) signals
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV
Bridges	SR 307 bridge over I-16 is five lanes wide	
Traffic Control	Construct improvements while maintaining traffic on existing facility	





## Central Georgia HPC 6 Corridor Management Plan

### Environmental Issues (From field observations)

Issue	Comments / Observations
History	One potential resource and one potentially eligible canal.
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Wetlands and a canal/tributary to Little Ogeechee Creek
Wildlife Refuge	N/A
Endangered Species	Potential eastern indigo snake summer foraging habitat.
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide or Individual Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Chatham
<b>Map Code</b>	600
<b>Route</b>	I-16
<b>Location Description</b>	I-16/SR 307 Interchange
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/20/02

### Recommendation Description

Reconstruct SR 307/I-16 interchange with longer entrance and exit ramps and directional ramps as necessary.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
Interchange Reconstruction				\$8,000,000
Source of Unit Cost		similar interchanges		

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Dean Forest Road over I-16			22,000	\$60	\$1,320,000

### Signals

2	\$100,000	\$200,000
---	-----------	-----------

### ITS

	# Units	Unit Cost	Total
CCTV at strategic locations	2	\$10,000	\$20,000

### Right of Way

	Area (ac)	Unit Cost	Total
<u>Urban</u>			
Land			
commercial	8.3	\$275,000	\$2,282,500
potentially commercial	3.8	\$150,000	\$570,000
residential	6.0	\$55,000	<u>\$330,000</u>
land subtotal			\$3,182,500
Improvements Taken			\$400,000
Relocation			\$150,000
Damages			<u>\$750,000</u>
Subtotal			\$4,482,500
<u>Rural</u>			
Land			
Improvements Taken			
Relocation			
Damages			
Subtotal			
<u>Net Cost</u>			\$4,482,500
<u>Scheduling Contingency</u>			\$2,465,375
<u>Admn/Court Cost</u>			\$4,168,725
<u>Inflation Factor</u>			<u>\$4,446,640</u>
<u>Right of Way Total</u>			<b>\$15,563,240</b>

### Summary

Interchange Reconstruction	\$8,000,000	
Bridge	\$1,320,000	
Signals	\$200,000	
ITS	\$20,000	
Construction Subtotal	\$9,540,000	
CEI	\$954,000	10% of construction subtotal
Construction Estimate	\$10,494,000	construction subtotal plus CEI
Preliminary Engineering	\$954,000	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$15,563,240	
Utility Relocation	\$763,200	8% of construction subtotal
Total	\$27,774,440	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

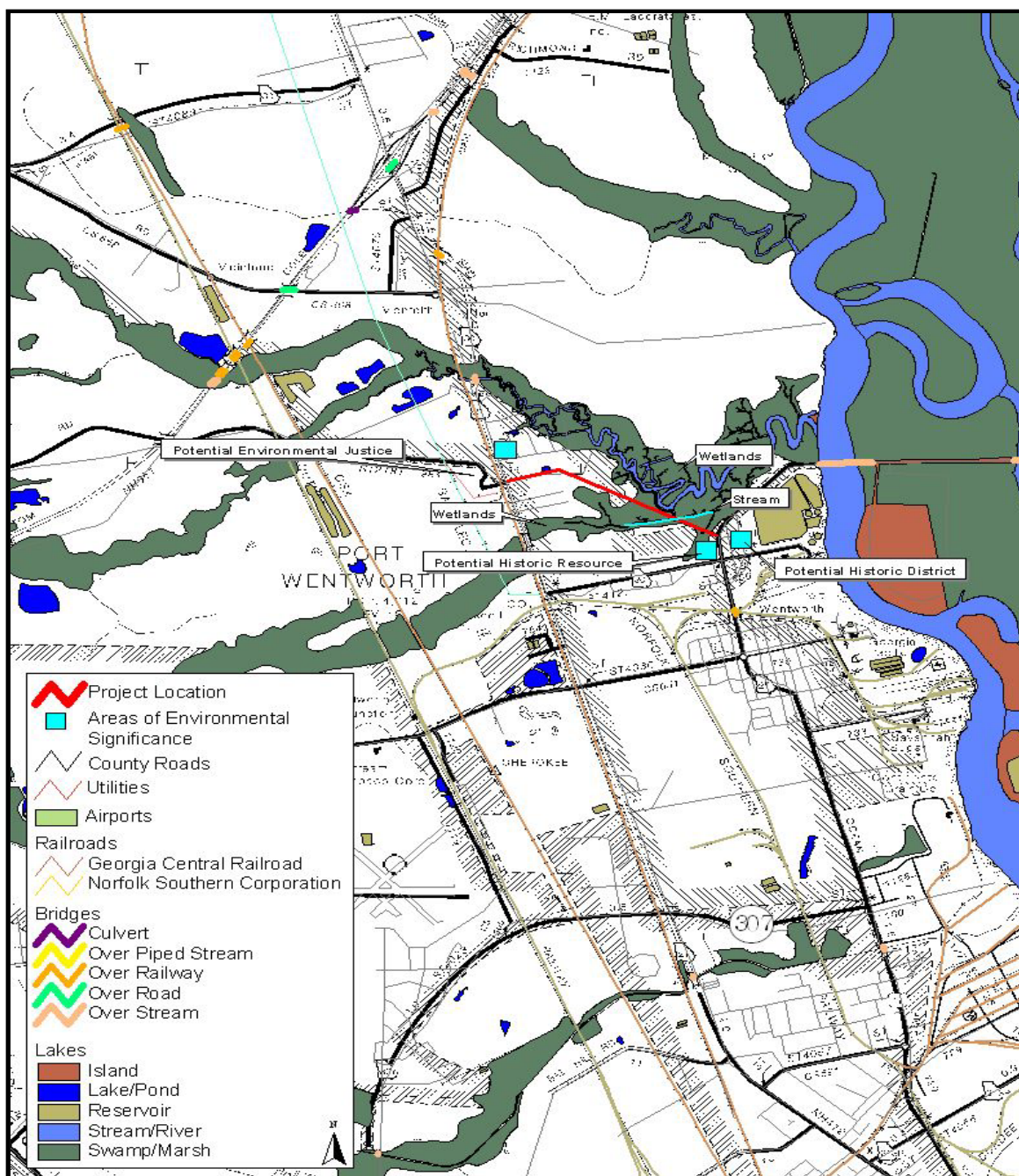
<b>NEED AND PURPOSE:</b>  Jimmy DeLoach Parkway provides an important four-lane connection from I-95 to SR 21 with an interchange at I-95.  The purpose of the project is to improve access to the Port of Savannah. A two-lane extension of Jimmy DeLoach Parkway should be constructed from SR 21 to SR 25.  This corridor is proposed to be constructed as a 2-lane roadway with acquisition of right-of-way for four lanes. The majority of vehicular traffic will get off of Jimmy DeLoach Parkway at SR 21 with predominately freight traffic continuing onto SR 25 and the Port of Savannah. In 2025 the corridor is projected to have a LOS D. The roadway should be monitored to assess the need to be widened to four lanes.				County	Chatham
				Map Code	601
				Route #	Jimmy DeLoach Parkway Extension
				GDOT District	5
				Cong. District	12
				RDC	Coastal Georgia
				Length	0.87 mile
				Mileposts	
From: SR 21	To: SR 25				
Year	1998	2025	Access Control	From: (New route)	To: uncontrolled
Traffic Vol.:	0	8,000	% Increase in Capacity	New route	
Truck %:	0%	40%	% Increase in Travel Speed	New route	
No. of Lanes	0	2	% Shift in Non-Freight		
<b>PROJECT DESCRIPTION:</b>  Construct Jimmy DeLoach Parkway Extension as a two lane rural section from SR 21 to SR 25. This road will be constructed on new location is to align with existing SR 25 to the south. The SR 25 connection to the east that crosses the Savannah River is to T into this new road. Right of way for future widening to four lanes should be acquired and traffic volumes should be monitored to assess the need for a future widening.					



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Eng.	NCPD	\$394,000
Right-of-Way	NCPD	\$10,216,000
Utilities	Local	\$197,000
Construction	NCPD	\$4,330,000
<b>Project Cost</b>		<b>\$15,137,000</b>

### Location and Environmental Resource Map

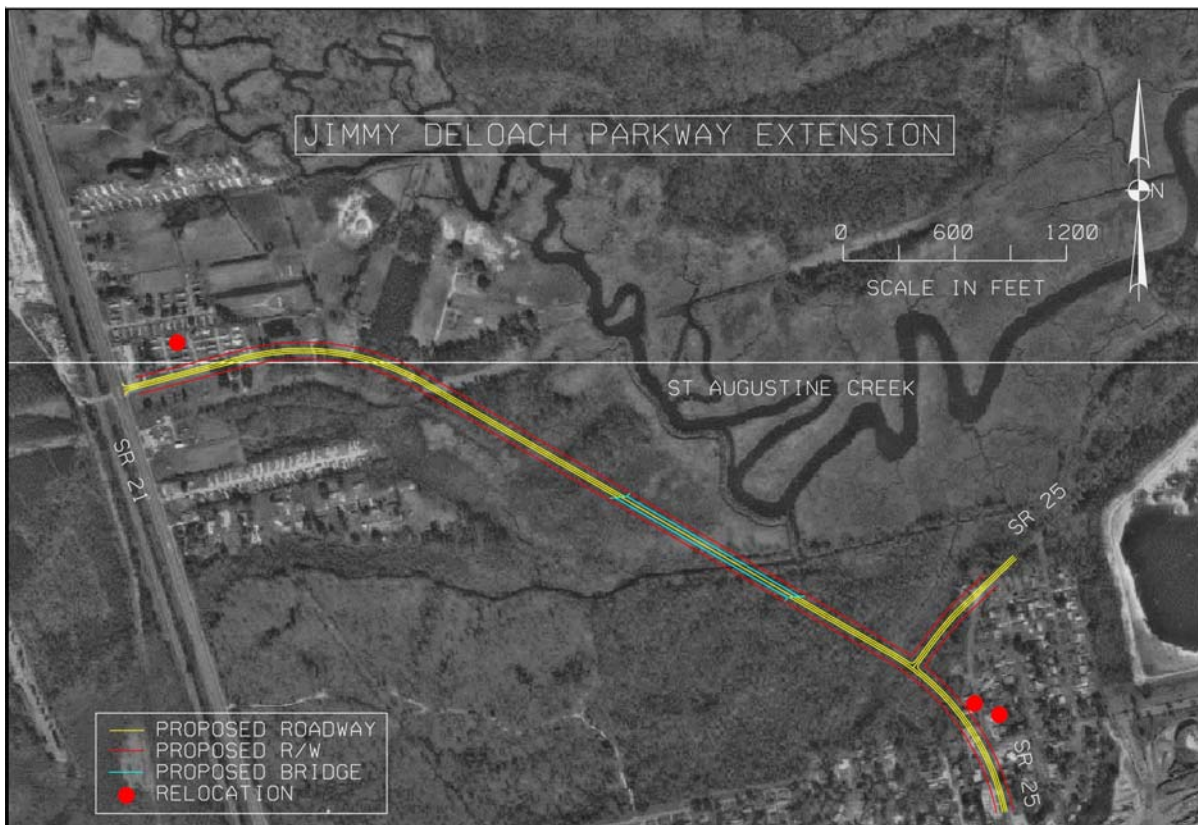






## Central Georgia HPC 6 Corridor Management Plan

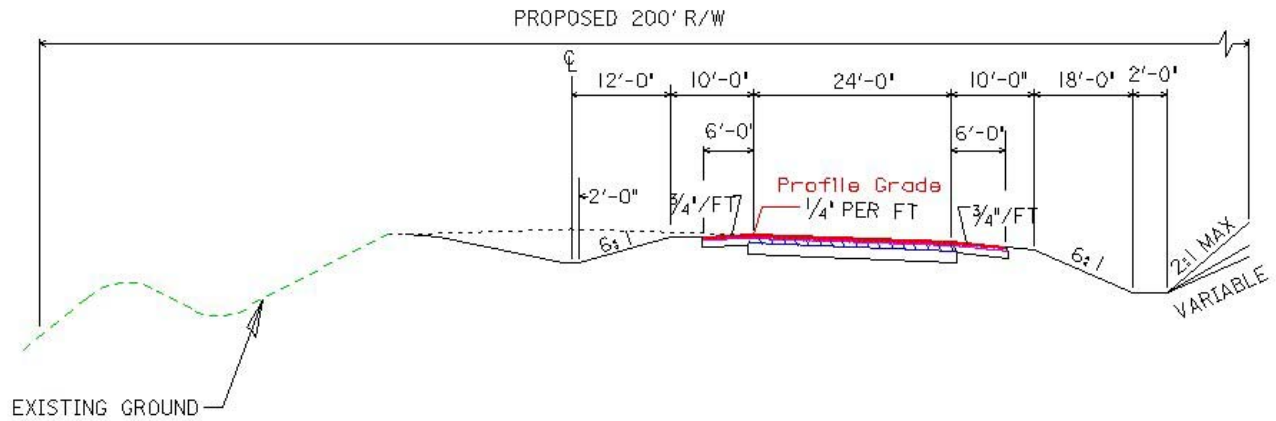
### Location Sketch





Typical Section\*

## JIMMY DELOACH PARKWAY EXTENSION TYPICAL SECTION



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	None	2 lane rural section
Speed Design	None	40 mph
Pavement	None	PCC
Signals	None	Two signals: at SR 21 and at connection to cross the Savannah River
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	None	Bridge over wetlands
Right of Way		90 feet
Traffic Control	Construct improvements while maintaining traffic on existing roads	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One potential district and one potential resource, both near SR 25
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	One near intersection of SR 21 and Jimmy DeLoach Parkway
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Expansive beaver impounded wetland system between SR 21 and SR 25. Multiple stream channels within wetland
Wildlife Refuge	N/A
Endangered Species	Potential foraging and nesting habitat for wood stork and bald eagle.
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide or Individual Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes



## Recommendation Description Initial Cost Estimate

<b>County</b>	Chatham
<b>Map Code</b>	601
<b>Route</b>	I-16
<b>Location Description</b>	Jimmy DeLoach Parkway Extension
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	1/10/03

### Recommendation Description

Extend Jimmy DeLoach Parkway (SR 30) from SR 21 to SR 25.  
Construct a two lane road off-center in right of way for a future four lane divided road.

### Highway

	Length (mi)	Width	Unit Cost	Total
	0.87	2 lanes	\$1,753,272	<b>\$1,525,347</b>
Source of Unit Cost			FDOT 2000 Transportation Costs	
Year			2000	\$1,623,400
Adjustment to 2002			4% per year is growth factor of 1.08	

### Bridges

Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
1070	36	38,520	\$60	\$2,311,200

### Signals

New Signal at Jimmy DeLoach/SR 170	1	\$100,000	\$100,000
------------------------------------	---	-----------	-----------

### ITS

none

### Right of Way

	Area (ac)		Unit Cost	Total
<u>Urban</u>				
Land				
commercial	2.0	9.48%	\$275,000	\$550,000
potentially commercial	1.1	5.21%	\$150,000	\$165,000
residential	1.5	7.11%	\$55,000	\$82,500
marsh/wetlands	<u>16.5</u>	78.20%	\$30,000	<u>\$495,000</u>
land subtotal	21.1			\$1,292,500
Improvements Taken				\$800,000
Relocation				\$50,000
Damages				<u>\$800,000</u>
Subtotal				<b>\$2,942,500</b>

### Rural

Land  
Improvements Taken  
Relocation  
Damages  
Subtotal

<u>Net Cost</u>	\$2,942,500
<u>Scheduling Contingency</u>	\$1,618,375
<u>Admn/Court Cost</u>	\$2,736,525
<u>Inflation Factor</u>	<u>\$2,918,960</u>
<u>Right of Way Total</u>	<b>\$10,216,360</b>

**Summary**

Highway	\$1,525,347	
Bridge	\$2,311,200	
Signals	\$100,000	
ITS	\$0	
Construction Subtotal	\$3,936,547	
CEI	\$393,655	10% of construction subtotal
Construction Estimate	\$4,330,201	construction subtotal plus CEI
Preliminary Engineering	\$393,655	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$10,216,360	
Utility Relocation	\$196,827	5% of construction subtotal
Total	<b>\$15,137,043</b>	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

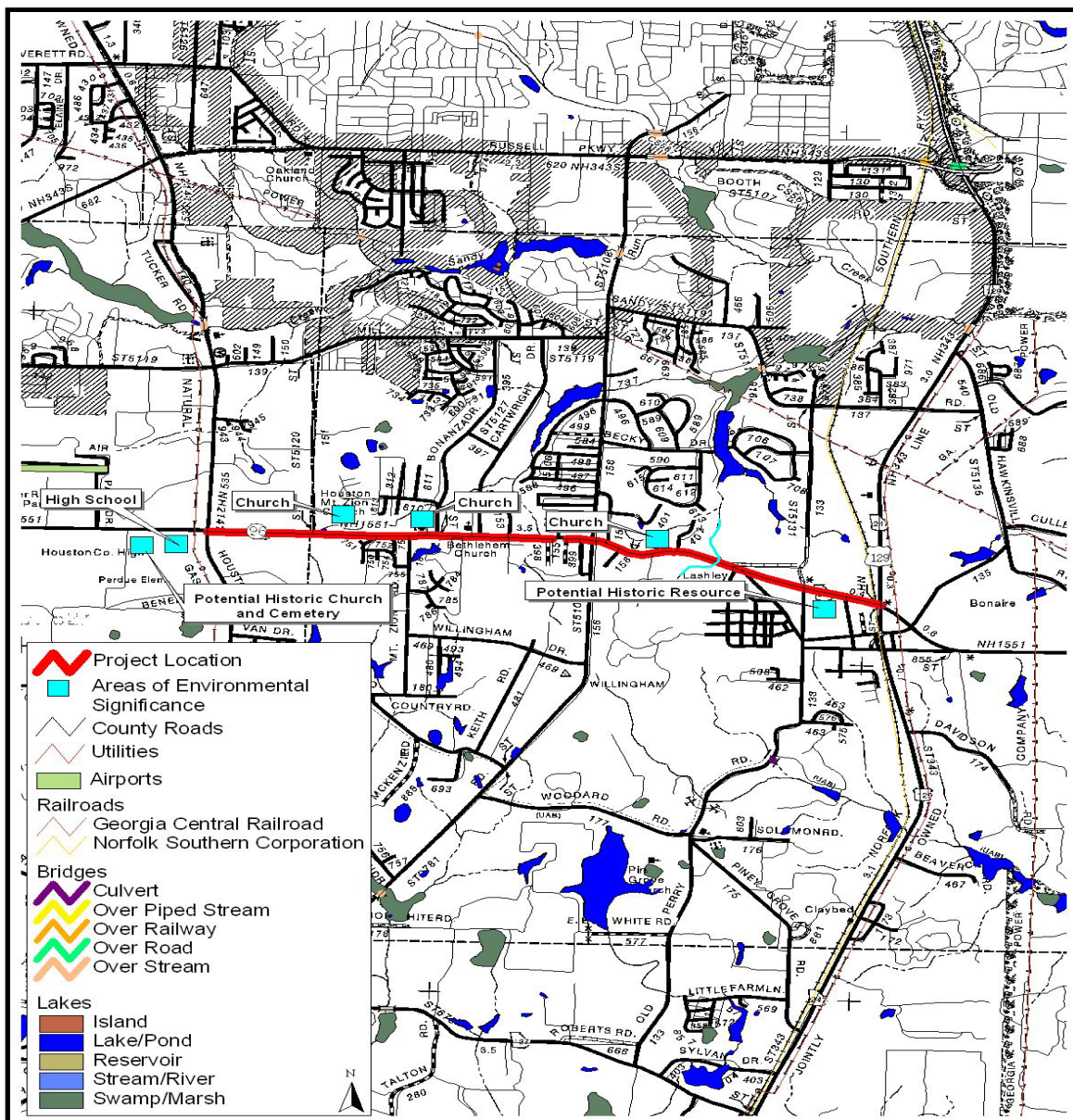
<b>NEED AND PURPOSE:</b>  The purpose of the project is to improve traffic operations on SR 96. The described location is on STRAHNET and, therefore, is a freight focused corridor. This segment of roadway is classified as both a rural minor arterial and an urban principal arterial. The 3 year accident rate from 1995-1997 for the portion classified as a rural minor arterial is 135 as compared to the statewide average of 207. The 3 year accident rate for the portion classified as an urban principal arterial is 274 as compared to the statewide average of 586. The current AADT is 10,900 and the current volume to capacity ratio is .76. With no improvement, the corridor or is anticipated to have an AADT of 18,749 and a volume to capacity ratio of 1.26 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS D and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS E without the project and a LOS of A with the project in place. Implementation of this project will improve the LOS.				County		Peach, Houston, and Twiggs	
				Map Code		148	
				Route #		SR 96	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Georgia	
				Length		Varies	
				Mileposts			
From: Varies		To: Varies					
Year	1998	2025	Access Control	From: No Control To: Varies	STRAHNET	Yes	
Traffic Vol.:	10,900	18,700	1995-1997 3 year Accident Rate	135 rural minor arterial 274 urban principal arterial			
Truck %:	2%	2%	% Increase in Travel Speed		% Increase in Capacity		
No. of Lanes	2	6	% Shift in Non-Freight				
<b>PROJECT DESCRIPTION:</b>  Provide a five-stage program of improvements. <u>Stage 1: Solve Immediate Hot Spots Only.</u> Alt 1A – Short Range (2003-2008): Provide two lanes with operational improvements (turn lanes, intersection improvements at major collectors and above, signals, signal coordination, and signal system timing). Intersection improvements are already programmed at Houston Lake Road and at US 41. Provide intersection improvements at US 129 (SR 247) and at Moody Road. Provide left turn lanes at High School, Middle School, Kersey Road, Mt. Zion Road, Bonanza Drive, Cartwright Drive, and Old Perry Road. Construct two lane grade separation at railroad east of the Ocmulgee River in Twiggs County. <u>Stage 2: Beyond Hot Spots, to Make the Corridor Freight Friendly.</u> Alt 1B – Mid Range: Provide two lanes with grade separations at major intersections only: US 41, Houston Lake Road, Moody Road, and SR 247/Railroad. <u>Stage 3: Protective Right of Way Purchase &amp; Access Management.</u> Alt 1C – Mid Range: Buy right of way for future four lane divided section with frontage roads in the area most likely to be intensively developed from Lake Joy Road to Thompson Mill Road. Study corridor to apply access management stds from I-75 to one mile east of Thompson Mill Road. <u>Stage 4: Four lane Corridor from US 41 to SR 247.</u> Alt 2A – Long Range: Widen from two lanes to four lane divided super arterial from US 41 to Thompson Mill Road. At grade separations construct second two-lane bridge to provide four lane divided section at: US 41, Houston Lake Road, Moody Road, and SR 247/Railroad. Construct frontage roads from Lake Joy Road to Thompson Mill Road. Study corridor to apply access management standards from I-75 to one mile east of Thompson Mill Road. CCTV units will be included in this stage. <u>Stage 5: Minimum Standard 4 Lane Divided GRIP Section from Ft. Valley to US 41 and from Thompson Mill Road to I-16 for System Continuity.</u> Alt 2B – Long Range: Widen from two lanes to four lane divided GRIP section from Ft. Valley Bypass to US 41 and from Thompson Mill Road in Houston County to I-16. Widen the two lane grade separation (Stage 1) at railroad east of the Ocmulgee River in Twiggs County to a four lane divided grade separation.							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Short Range Cost Estimate	Medium Range Cost Estimate	Long Range Cost Estimate	Total Cost Estimate
Planning	NCPD	\$0	\$100,000	\$100,000	\$200,000
Preliminary Eng.	NCPD	\$1,230,000	\$1,266,000	\$12,968,000	\$15,464,000
Right-of-Way	NCPD	\$9,797,000	\$149,770,000	\$31,040,000	\$190,607,000
Utilities	Local	\$1,230,000	\$1,055,000	\$7,253,000	\$9,538,000
Construction	NCPD	\$13,529,000	\$11,606,000	\$129,158,000	\$154,293,000
<b>Project Cost</b>		<b>\$25,786,000</b>	<b>\$163,797,000</b>	<b>\$180,518,000</b>	<b>\$370,101,000</b>

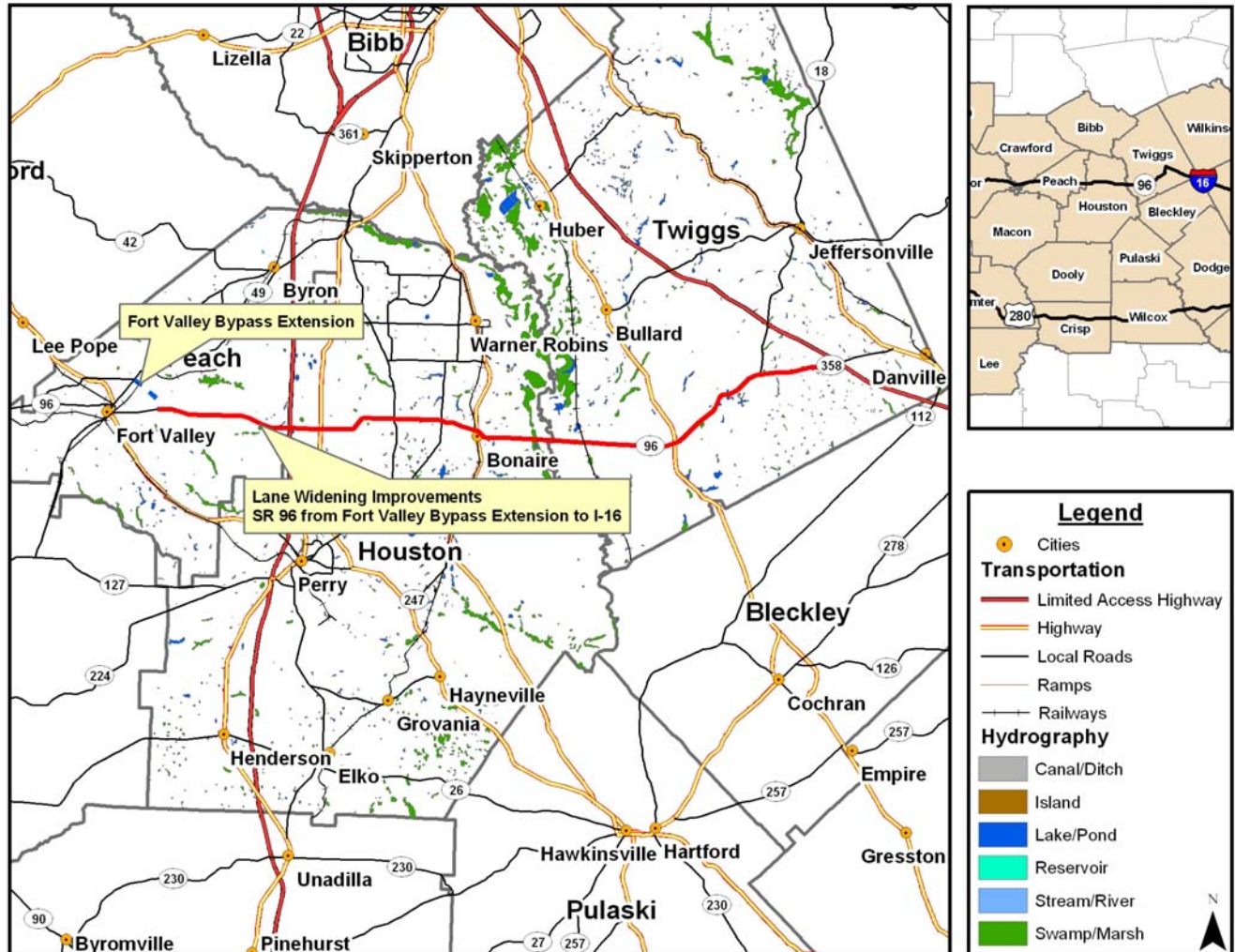
Location and Environmental Resource Map  
Stage 1-4





# Central Georgia HPC 6 Corridor Management Plan

## Stage 5







## Central Georgia HPC 6 Corridor Management Plan

Photo of location



Looking east on SR 96 toward Houston Lake Road intersection.



Map of Warner Robins, Georgia, showing the location of the Robins Air Force Base and surrounding roads. A yellow highlighted route is shown, starting from the west, passing through Lakeview, and ending near the base. The route is marked with blue triangles and the number 96. Key roads include Lakeview Rd, Lake Joy Rd, Lakeview Dr, and Lakeview St. The Robins Air Force Base is labeled in red text in the upper right corner.

■ - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	2 12' lanes	Phased improvements. Ultimately 4 lane divided GRIP section with frontage roads
Shoulder	4' grass	
Speed Design	50 mph	50 mph
Additional Design Criteria	Left and right turn lanes	Grade separations at major intersections
Observed Safety Concerns	Railroad grade crossing immediately west of intersection with SR 247	
Drainage	Side drainage swales	Enclosed longitudinal drainage in urbanized areas; side drainage ditches in rural areas
Pavement	Asphalt	Ultimately PCC for through lanes and shoulders; temporary pavement: asphalt
Signals	Houston Lake Road, Moody Road, US 129 (SR 247)	Same plus US 41 and some major collector roads
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV
Bridges	None	Bridges over major cross roads: US 41, Houston Lake Road, Moody Rd, SR 247/RR
Other Major Structures		Grade separation with railroad in Twiggs County
Access Control	Uncontrolled	Controlled in urbanized areas; uncontrolled in rural areas
Right of Way	100 feet in most places between Houston Lake Road and SR 247; 80 feet - rural areas	Minimum 240 foot right of way in urban areas; min 200 RW in rural areas
Observed Existing Utilities	Power lines, water lines	
Railroads	Railroad grade crossing immediately west of SR 247 on SR 96	
Traffic Control	Grade separations must be constructed parallel to existing SR 96 to maintain traffic during construction	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One church and cemetery, one potential historic resource
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	Two non-historic churches, one high school
Parks and Recreation	N/A
Wetlands and Streams	Small creek and potential wetlands associated with creek
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

Stage 1: Solve Immediate Hot Spots Only

**County** Houston  
**Map Code** 148  
**Route** SR 96  
**Location Description** SR 96 from Houston Lake Road to US 129  
**Prepared By** David Low  
**Date Last Updated** 11/20/02

### Recommendation Description

Alt 1A - Short Range (2003-2008): Provide two lanes with operational improvements (turn lanes, intersection improvements at major collectors and above, signals, signal coordination, and signal system timing).

Intersection improvements are already programmed at Houston Lake Road and at US 41.

Provide intersection improvements at US 129 (SR 247) and at Moody Road.

Provide left turn lanes at High School, Middle School, Kersey Road, Mt. Zion Road, Bonanza Drive, Cartwright Drive, and Old Perry Road.

Construct two lane grade separation at RR east of Ocmulgee River in Twiggs County.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Part 1</u>				
Intersection Improvements				
SR 247	1.2		\$2,834,244	\$3,401,093
extend concrete panels & upgrade gates at RR crossing				<u>\$300,000</u>
				\$3,701,093
Moody Road	1.2		\$2,834,244	\$3,401,093
Subtotal				\$7,102,186
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,624,300	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
<u>Part 2</u>				
Left turn lanes				
High School	0.4		\$1,163,536	\$465,414
Middle School	0.4		\$1,163,536	\$465,414
Kersey Road	0.4		\$1,163,536	\$465,414
Mt. Zion Road	0.4		\$1,163,536	\$465,414
Bonanza Drive	0.4		\$1,163,536	\$465,414
Cartwright Drive	0.4		\$1,163,536	\$465,414
Old Perry Road	0.4		\$1,163,536	<u>\$465,414</u>
Subtotal				\$3,257,901
Source of Unit Cost	GDOT 2002 Transportation Costs		\$1,163,536	
Year	2002			
Adjustment to 2002	none			
<u>Part 3 - Construct two lane grade separation at RR east of Ocmulgee River in Twiggs County.</u>				
	0.3		\$1,944,000	\$583,200
Source of Unit Cost	FDOT 2000 Transportation Costs		\$1,800,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges



	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total	
Bridge over RR in Twiggs County	1	200	47	9,400	\$60	<u>\$564,000</u>
Subtotal						\$564,000

#### Signals

new signals	5			\$100,000	\$500,000
master	1			\$20,000	\$20,000
fiberoptic interconnect cable	4.5			\$55,000	<u>\$247,500</u>
Subtotal					\$767,500

Signal system timing	8			\$3,000	\$24,000
----------------------	---	--	--	---------	----------

Total					\$791,500
-------	--	--	--	--	-----------

#### ITS

#### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Intersection Improvements						
<u>SR 247</u>						
Land						
commercial	0.9	24	114,048	2.62	\$275,000	\$720,000
residential	0.3	24	38,016	0.87	\$75,000	<u>\$65,455</u>
subtotal						\$785,455
Improvements Taken						\$250,000
Relocation						\$150,000
Damages						<u>\$350,000</u>
Subtotal						\$1,535,455
<u>Moody Road</u>						
Land						
commercial	0.6	24	76,032	1.75	\$275,000	\$480,000
residential	0.6	24	76,032	1.75	\$75,000	<u>\$130,909</u>
subtotal						\$610,909
Improvements Taken						\$200,000
Relocation						\$125,000
Damages						<u>\$275,000</u>
Subtotal						\$1,210,909
<u>Grade Separation for RR Crossing in Twiggs Co (R/W cost includes width necessary for future 4 lane section)</u>						
Land	0.3	100	158,400	3.64	\$10,000	\$36,364
Improvements Taken						\$17,490
Relocation						\$5,400
Damages						<u>\$16,200</u>
Subtotal						\$75,454

<u>Net Cost</u>	\$2,821,817
<u>Scheduling Contingency</u>	\$1,552,000
<u>Admn/Court Cost</u>	\$2,624,290
<u>Inflation Factor</u>	<u>\$2,799,243</u>
<u>Right of Way Total</u>	<b>\$9,797,350</b>

#### Summary

Highway	\$10,943,286
Bridges	\$564,000
Signals	\$791,500
ITS	
Construction Subtotal	\$12,298,786

CEI	\$1,229,879	10% of construction subtotal
-----	-------------	------------------------------

Construction Estimate	\$13,528,665	construction subtotal plus CEI
Preliminary Engineering	\$1,229,879	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$9,797,350	
Utility Relocation	\$1,229,879	10% of construction subtotal
Total Cost	\$25,785,772	

## Recommendation Description Initial Cost Estimate

Stage 2: Beyond Hot Spots, to Make the Corridor Freight Friendly

**County** Houston  
**Map Code** 148  
**Route** SR 96  
**Location Description** SR 96 from US 41 to SR 247  
**Prepared By** David Low  
**Date Last Updated** 11/20/02

### Recommendation Description

Alt 1B - Mid Range: Provide two lanes with grade separations at major intersections only:

US 41  
 Houston Lake Road  
 Moody Road  
 SR 247 & RR  
 Jug handles will tie SR 96 to the major cross roads.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Part 1 - US 41 Grade Separation</u>	0.6		\$2,527,200	\$1,516,320
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08	1/2 freeway cost	
Added Difficulty Factor		staging construction under traffic: multiply by factor of 1.3		
<u>Part 2 - Houston Lake Road Grade Separation</u>	0.6		\$2,527,200	\$1,516,320
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
Added Difficulty Factor		staging construction under traffic: multiply by factor of 1.3		
<u>Part 3 - Moody Road Grade Separation</u>	0.6		\$2,527,200	\$1,516,320
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
Added Difficulty Factor		staging construction under traffic: multiply by factor of 1.3		
<u>Part 4 - SR 247 &amp; RR Grade Separation</u>	0.8		\$2,527,200	\$2,021,760
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
Added Difficulty Factor		staging construction under traffic: multiply by factor of 1.3		
Subtotal				\$6,570,720

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Bridge over US 41	200	53	10,600	\$60	\$636,000
Bridge over Houston Lake Road	200	53	10,600	\$60	\$636,000
Bridge over Moody Road	200	53	10,600	\$60	\$636,000
Bridge over SR 247 & RR	400	53	21,200	\$60	<u>\$1,272,000</u>
Subtotal					\$3,180,000

### Signals

US 41 Grade Separation	2	\$100,000	\$200,000
Houston Lake Road Grade Separation	2	\$100,000	\$200,000
Moody Road Grade Separation	2	\$100,000	\$200,000
SR 247 & RR Grade Separation	2	\$100,000	<u>\$200,000</u>

Subtotal	\$800,000
----------	-----------

**ITS**

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Part 1 - US 41 Grade Separation</u>						
Land						
commercial	0.2	120	126,720	2.91	\$275,000	\$800,000
residential	0.4	120	253,440	5.82	\$55,000	<u>\$320,000</u>
subtotal						\$1,120,000
Improvements Taken						\$500,000
Relocation						\$100,000
Damages						<u>\$250,000</u>
Subtotal						\$1,970,000
<u>Part 2 - Houston Lake Road Grade Separation</u>						
Land						
commercial	0.6	120	380,160	8.73	\$275,000	\$2,400,000
residential		120	0	0.00	\$55,000	\$0
subtotal						\$2,400,000
Improvements Taken						\$1,500,000
Relocation						\$200,000
Damages						<u>\$600,000</u>
Subtotal						\$4,700,000
<u>Part 3 - Moody Road Grade Separation</u>						
Land						
commercial	0.4	120	253,440	5.82	\$275,000	\$1,600,000
residential	0.2	120	126,720	2.91	\$55,000	<u>\$160,000</u>
subtotal						\$1,760,000
Improvements Taken						\$1,500,000
Relocation						\$200,000
Damages						<u>\$600,000</u>
Subtotal						\$4,060,000
<u>Part 4 - SR 247 &amp; RR Grade Separation</u>						
Land						
commercial	0.5	120	316,800	7.27	\$275,000	\$2,000,000
residential	0.3	120	190,080	4.36	\$55,000	<u>\$240,000</u>
subtotal						\$2,240,000
Improvements Taken						\$1,750,000
Relocation						\$250,000
Damages						<u>\$600,000</u>
Subtotal						\$4,840,000
<u>Net Cost</u>						\$15,570,000
<u>Scheduling Contingency</u>						\$8,563,500
<u>Admn/Court Cost</u>						\$14,480,100
<u>Inflation Factor</u>						<u>\$15,445,440</u>
<u>Right of Way Total</u>						<b>\$54,059,040</b>

**Summary**

Highway	\$6,570,720	
Bridges	\$3,180,000	
Signals	\$800,000	
ITS		
Construction Subtotal	\$10,550,720	
CEI	\$1,055,072	10% of construction subtotal
Construction Estimate	\$11,605,792	construction subtotal plus CEI
Preliminary Engineering	\$1,266,086	12% of construction subtotal includes 1% concept, 1% environmental document, 10% design
Right of Way	\$54,059,040	

Utility Relocation	\$1,055,072	10% of construction subtotal
Total Cost	\$67,985,990	



## Recommendation Description Initial Cost Estimate

Stage 3: Protective Right of Way Purchase & Access Management

**County** Houston  
**Map Code** 148  
**Route** SR 96  
**Location Description** SR 96 from Lake Joy Road to Thompson Mill Road  
**Prepared By** David Low  
**Date Last Updated** 11/22/02

### Recommendation Description

Alt 1C - Mid Range: Buy right of way for future 4 lane divided section and frontage roads  
 in the area most likely to be intensively developed from Lake Joy Road to Thompson Mill Road.  
 Study corridor to apply access management standards from I-75 to 1 mile east of Thompson Mill Road.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
none				

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
none			0	\$60	\$0

### Signals

### ITS

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial	1.7	140	1,256,640	28.85	\$275,000	\$7,933,333
residential	5.5	140	4,065,600	93.33	\$55,000	<u>\$5,133,333</u>
subtotal						\$13,066,667
Improvements Taken						\$5,000,000
Relocation						\$2,500,000
Damages						<u>\$7,000,000</u>
Subtotal						\$27,566,667
<u>Net Cost</u>						\$27,566,667
<u>Scheduling Contingency</u>						\$15,161,667
<u>Admn/Court Cost</u>						\$25,637,000
<u>Inflation Factor</u>						<u>\$27,346,133</u>
<u>Right of Way Total</u>						<b>\$95,711,467</b>

### Access Management Part 1 (Planning)

Study corridor to apply access management standards from I-75 to 1 mile east of Thompson Mill Road. \$100,000

### Summary

Highway	\$0	
Bridges	\$0	
Signals	\$0	
ITS		
Construction Subtotal	\$0	
CEI	\$0	10% of construction subtotal
Construction Estimate	\$0	construction subtotal plus CEI
Preliminary Engineering	\$0	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$95,711,467	
Access Management (Planning)	\$100,000	
Utility Relocation	\$0	2% of construction subtotal
<b>Total</b>	<b>\$95,811,467</b>	

## Recommendation Description Initial Cost Estimate

Stage 4: Four lane divided Corridor from US 41 to SR 247

<b>County</b>	Houston
<b>Map Code</b>	148
<b>Route</b>	SR 96
<b>Location Description</b>	SR 96 from US 41 to SR 247
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/18/02

### Recommendation Description

Alt 2A - Long Range: Widen from two lanes to four lane divided super arterial from US 41 to Thompson Mill Road.

At grade separations construct second two-lane bridge to provide a four lane divided section.

US 41  
Houston Lake Road  
Moody Road  
SR 247 & RR

Construct frontage roads from Lake Joy Road to Thompson Mill Road.

Study corridor to apply access management standards from I-75 to 1 mile east of Thompson Mill Road.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Part 1: Expand US 41 Grade Sep to 4 lane divided</u>	0.6		\$1,944,000	\$1,166,400
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08	1/2 freeway cost	
<u>Part 2: Expand Houston Lk Rd Grade Sep to 4 ln div</u>	0.6		\$1,944,000	\$1,166,400
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
<u>Part 3: Expand Moody Rd Grade Sep to 4 ln div</u>	0.6		\$1,944,000	\$1,166,400
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
<u>Part 4: Expand SR 247 &amp; RR Grade Sep to 4 ln div</u>	0.8		\$1,944,000	\$1,555,200
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
<u>Part 5: Widen from 2 lanes to 4 lane divided</u>	8.1		\$2,332,800	\$18,895,680
Source of Unit Cost		FDOT 2000 Transportation Costs	\$1,800,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
Added Difficulty Factor		reconstruct parts of existing road to GRIP standards: multiply by factor of 1.2		
<u>Part 6: Construct 2 two-lane frontage roads from Lake Joy Road to Thompson Mill Road</u>	7.6		\$4,111,344	\$31,246,214
Source of Unit Cost		FDOT 2000 Transportation Costs	\$3,806,800	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		
Subtotal				\$55,196,294

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Bridge over US 41	200	53	10,600	\$60	\$636,000
Bridge over Houston Lake Road	200	53	10,600	\$60	\$636,000
Bridge over Moody Road	200	53	10,600	\$60	\$636,000
Bridge over SR 247 & RR	400	53	21,200	\$60	<u>\$1,272,000</u>
Subtotal					\$3,180,000

**Signals**

US 41 Grade Separation	1	\$150,000	\$150,000
Houston Lake Road Grade Separation	1	\$150,000	\$150,000
Moody Road Grade Separation	1	\$150,000	\$150,000
SR 247 & RR Grade Separation	1	\$150,000	<u>\$150,000</u>
Subtotal			\$600,000

**ITS**

Component	# Units	Unit Cost	Totals
CCTV at strategic locations	6	\$10,000	\$ 60,000
Fiber Optic Cable Installed	8.6 mi.	\$264,000 per mi.	<u>\$ 2,270,400</u>
(This is section G&O extended from US 129 to I-75)			\$ 2,330,400

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial		140	0	0.00	\$275,000	\$0
residential	1.9	140	1,404,480	32.24	\$55,000	<u>\$1,773,333</u>
subtotal						\$1,773,333
Improvements Taken						\$600,000
Relocation						\$300,000
Damages						<u>\$700,000</u>
Subtotal						\$3,373,333
<u>Net Cost</u>						\$3,373,333
<u>Scheduling Contingency</u>						\$1,855,333
<u>Admn/Court Cost</u>						\$3,137,200
<u>Inflation Factor</u>						<u>\$3,346,347</u>
<u>Right of Way Total</u>						<b>\$11,712,213</b>

**Access Management Part 2 (Planning and Permitting)**

Study corridor to apply access management standards from I-75 to 1 mile east of Thompson Mill Road.	\$100,000
---	-----------

**Summary**

Highway	\$55,196,294	
Bridges	\$3,180,000	
Signals	\$600,000	
ITS	\$2,330,400	
Construction Subtotal	\$61,306,694	
CEI	\$6,130,669	10% of construction subtotal
Construction Estimate	\$67,437,364	construction subtotal plus CEI
Preliminary Engineering	\$7,356,803	12% of construction subtotal includes 1% concept, 1% environmental document, 10% design
Right of Way	\$11,712,213	
Access Management (Planning & Permitting)	\$100,000	
Utility Relocation	\$6,130,669	10% of construction subtotal
Total Cost	\$92,737,050	

Recommendation	Description	Initial Cost Estimate
1	Implement a new software system for project management.	\$50,000
2	Hire a new marketing executive to lead the team.	\$75,000
3	Upgrade the company's website to improve user experience.	\$30,000
4	Invest in research and development for a new product line.	\$120,000
5	Expand operations to a new geographic market.	\$90,000
6	Implement a new HR system to streamline recruitment.	\$40,000
7	Upgrade the company's IT infrastructure for better security.	\$60,000
8	Launch a new social media campaign to increase brand awareness.	\$20,000
9	Invest in employee training and development programs.	\$35,000
10	Implement a new financial reporting system for better transparency.	\$45,000

Stage 5: Min standard 4 lane divided GRIP section from Ft. Valley to US 41 and from Thompson Mill Road to I-16 for system continuity

County	Peach/Houston/Twiggs
--------	----------------------

**Map Code** 148

Route SR 96

<b>Location Description</b>	SR 96 from Ft Valley Bypass to US 41 and from Thompson Mill Road to I-16
-----------------------------	--

Prepared By David Low

Date Last Updated 11/22/02

### Recommendation Description

Stage 5:

Alt 2B - Long Range: Widen from two lanes to four lane divided GRIP section from Ft. Valley Bypass to US 41 and from Thompson Mill Road in Houston County to I-16.

Widen existing grade separation to 4 lanes at RR east of Ocmulgee River in Twiggs County - initial grade separation constructed under Stage 1 (R/W purchased for entire 4 lane section of grade separation under Stage 1)

## Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1 - Widen from 2 lanes to 4 lane divided GRIP section from Ft. Valley Bypass to US 41</u>				
	6.5		\$2,344,464	\$15,239,016
Source of Unit Cost	FDOT 2000 Transportation Costs		\$1,809,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	reconstruct parts of existing road to GRIP standards: multiply by factor of 1.2			

Segment 2 - Widen from 2 lanes to 4 lane divided GRIP section from Thompson Mill Road to I-16

	15.5	\$2,344,464	\$36,339,192
Source of Unit Cost	FDOT 2000 Transportation Costs	\$1,809,000	
Year	2000		
Adjustment to 2002	4% per year is growth factor of 1.08		
Added Difficulty Factor	reconstruct parts of existing road to GRIP standards: multiply by factor of 1.2		

Segment 3 - Widen from 2 lanes to 4 lanes divided grade separation at RR east of Ocmulgee River in Twiggs Co

	0.3	\$1,944,000	\$583,200
Source of Unit Cost	FDOT 2000 Transportation Costs	\$1,800,000	
Year	2000		
Adjustment to 2002	4% per year is growth factor of 1.08		

## Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Bridge over Ocmulgee River	1200	47	56,400	\$60	\$3,384,000
Bridge over RR in Twiggs Co	200	47	9,400	\$60	\$564,000
Subtotal					<u>\$3,948,000</u>

## Signals

ITS	Component	# Units	Unit Cost	Totals
-----	-----------	---------	-----------	--------

## Right of Way

Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
----------------	-------	-------	-------	-----------	-------

Urban

## Land

commercial

0

0.00

\$275,000

\$0

industrial

\$250,000

residential

\$55,000

Improvements Taken

Relocation

Damages

Subtotal

Rural

## Land

22

100

11,616,000

266.67

\$10,000

\$2,666,667

Improvements Taken

\$1,300,000

Relocation

\$400,000

Damages

\$1,200,000

Subtotal

\$5,566,667

Net Cost

\$5,566,667

Scheduling Contingency

\$3,061,667

Admn/Court Cost

\$5,177,000

Inflation Factor\$5,522,133Right of Way Total**\$19,327,467****Summary**

Highway

\$52,161,408

Bridges

\$3,948,000

Signals

\$0

ITS

\$0

Construction Subtotal

\$56,109,408

CEI

\$5,610,941

10% of construction subtotal

Construction Estimate

\$61,720,349

construction subtotal plus CEI

Preliminary Engineering

\$5,610,941

10% of construction subtotal includes 1% concept, 1% environmental document, 8% design

Right of Way

\$19,327,467

Utility Relocation

\$1,122,188

2% of construction subtotal

Total Cost

\$87,780,944





## Central Georgia HPC 6 Corridor Management Plan

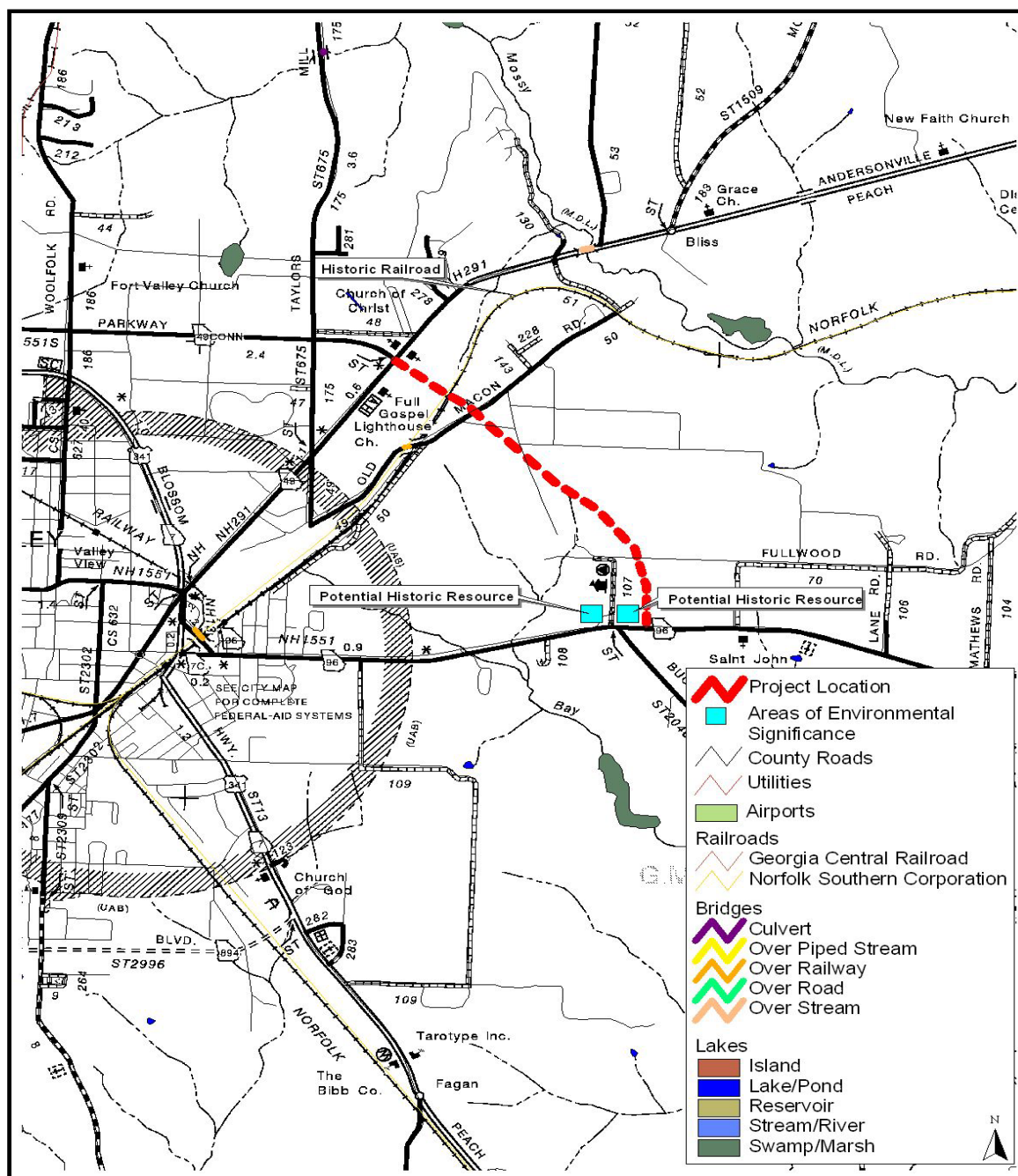
### Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. A deficiency was determined along SR 96 in downtown Fort Valley. Extending the existing bypass to connect SR 96 on the east and west sides of Fort Valley would relieve congestion in downtown Fort Valley. This additional capacity is necessary to accommodate future growth in traffic. Reduced congestion will create a safer environment for freight movement through the corridor				County	Peach
				Map Code	458
				Route #	New location
				GDOT District	3
				Cong. District	3
				RDC	Middle Georgia
				Length	2.1 miles
				Mileposts	
From: SR 49		To: SR 96			
Year	1998	2025	Access Control	From: none To: partial	
Traffic Vol.:		13,400	% Increase in Capacity		
Truck %:	N/A	N/A	% Increase in Travel Speed		
No. of Lanes	0	4	% Shift in Non-Freight		
<b>PROJECT DESCRIPTION:</b>  Construct 2.1 mile two lane Fort Valley Bypass Extension around the northeast side of town including a bridge over the railroad and Old Macon Road. Acquire right of way for future four lane divided section.					



Project Phase	Funding Source	Total Cost Estimate
Preliminary Eng.	NCPD	\$460,187
Right-of-Way	NCPD	\$10,448,000
Utilities	Local	\$92,037
Construction	NCPD	\$5,062,058
<b>Project Cost</b>		<b>\$16,062,000</b>

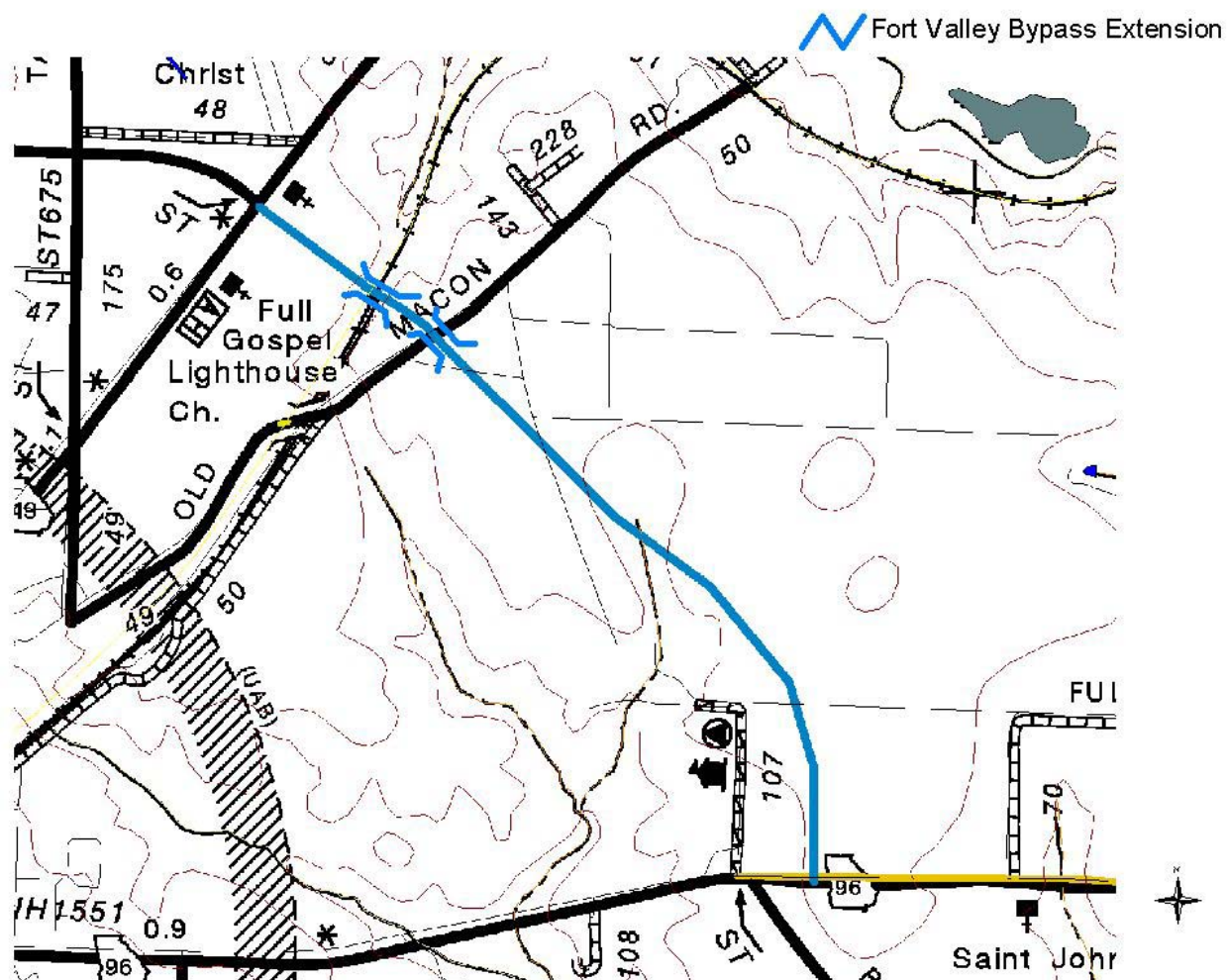
## Location and Environmental Resource Map





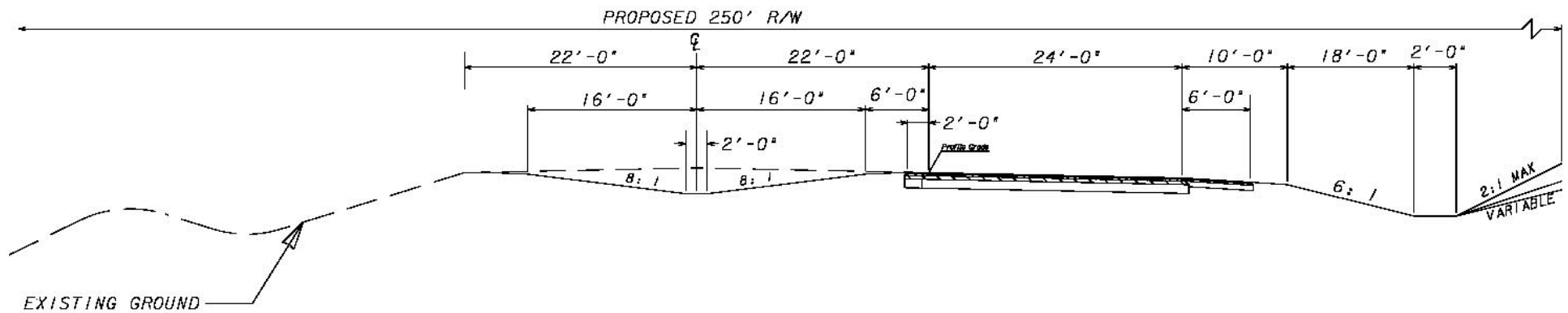
## Central Georgia HPC 6 Corridor Management Plan

### Concept Sketch Design





## FORT VALLEY BYPASS TYPICAL SECTION



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



# CENTRAL GEORGIA HPC6 CORRIDOR MANAGEMENT PLAN

## Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	None	2 lane rural section
Speed Design	None	50 mph
Pavement	None	Per GDOT Standards
Signals	None	SR 49, SR 96
Signing and Marking	None	Per GDOT Standards
ITS Opportunities	None	None
Bridges	None	Over railroad, over Old Macon Road
Right of Way	None	Acquire enough right of way for four lane divided section
Railroads	Norfolk Southern	





# CENTRAL GEORGIA HPC6 CORRIDOR MANAGEMENT PLAN

## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One railroad, one potential district, and three potential resources
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	Chamber of Commerce
Parks and Recreation	N/A
Wetlands and Streams	N/A
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	N/A
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Peach
<b>Map Code</b>	458
<b>Route</b>	SR 96
<b>Location Description</b>	SR 96 from SR 7C to US 341 in Fort Valley
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/23/02

### Recommendation Description

Extend Fort Valley Bypass as two lanes in enough right of way for a four lane divided section around the northeast side of town including bridges over the railroad and Old Macon Road.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	2.1	2 lanes	\$1,753,272	\$3,681,871
Source of Unit Cost	FDOT 2000 Transportation Costs		\$1,623,400	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Quantit	Length (ft)	Width (ft)	Area	Unit Cost	Total
over railroad	1	300	40	12,000	\$60	\$720,000
over Old Macon Road	1	300	40	12,000	\$60	<u>\$720,000</u>
Subtotal						\$1,440,000

### Signals

SR 49	\$100,000
SR 96	<u>\$100,000</u>
Subtotal	\$200,000

### ITS

none

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	2.1	250	2,772,000	63.64	\$30,000	\$1,909,091
Improvements Taken						\$500,000
Relocation						\$100,000
Damages						<u>\$500,000</u>
Subtotal						\$3,009,091
<u>Net Cost</u>						\$3,009,091
<u>Scheduling Contingency</u>						\$1,655,000
<u>Admn/Court Cost</u>						\$2,798,455
<u>Inflation Factor</u>						<u>\$2,985,018</u>
<u>Right of Way Total</u>						<b>\$10,447,564</b>

**Summary**

Highway	\$3,681,871	
Bridges	\$720,000	
Signals	\$200,000	
ITS	0	
Construction Subtotal	\$4,601,871	
CEI	\$460,187	10% of construction subtotal
Construction Estimate	\$5,062,058	construction subtotal plus CEI
Preliminary Engineering	\$460,187	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$10,447,564	
Utility Relocation	\$92,037	2% of construction subtotal
Total	\$16,061,847	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, and therefore, is a freight focused corridor. This roadway segment is classified as an urban principal arterial. The 3 year accident rate from 1995-1997 for the segment is 637 as compared to the statewide average of 586 for urban principal arterials. The current AADT is 25,600 and the current volume to capacity ratio is .72. With no improvement, the corridor is anticipated to have an AADT of 41,038 and a volume to capacity ratio of 1.2 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS C without the project and a LOS B with the project in place. Implementation of this project will improve the LOS.				County		Bibb	
				Map Code		79	
				Route #		SR 49/Shurling Drive	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Georgia	
				Length		1.7 miles	
				Mileposts			
				From: Maynard St.		To: New Clinton Rd.	
Year	1998	2025	Access Control	From: None To: None	STRAHNET	Yes	
Traffic Vol.:	25,600	41,000	1995-1997 3 year Accident Rate	637 urban principal arterial			
Truck %:	4%	4%	% Increase in Travel Speed	0%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen SR 49/Shurling Drive from four lanes with center turn lane to six lanes divided. The two bridges located within the limits of this work, SR 49/Shurling Drive over Walnut Creek and the pedestrian bridge over SR 49/Shurling Drive at the Appling Middle School will need to be replaced as part of this improvement.							



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	Local	\$792,000
Right-of-Way	State/Federal sources	\$10,416,000
Utilities	Local	\$396,000
Construction	State/Federal sources	\$8,711,000
<b>Project Cost</b>		<b>\$20,315,000</b>

## Location and Environmental Resource Map

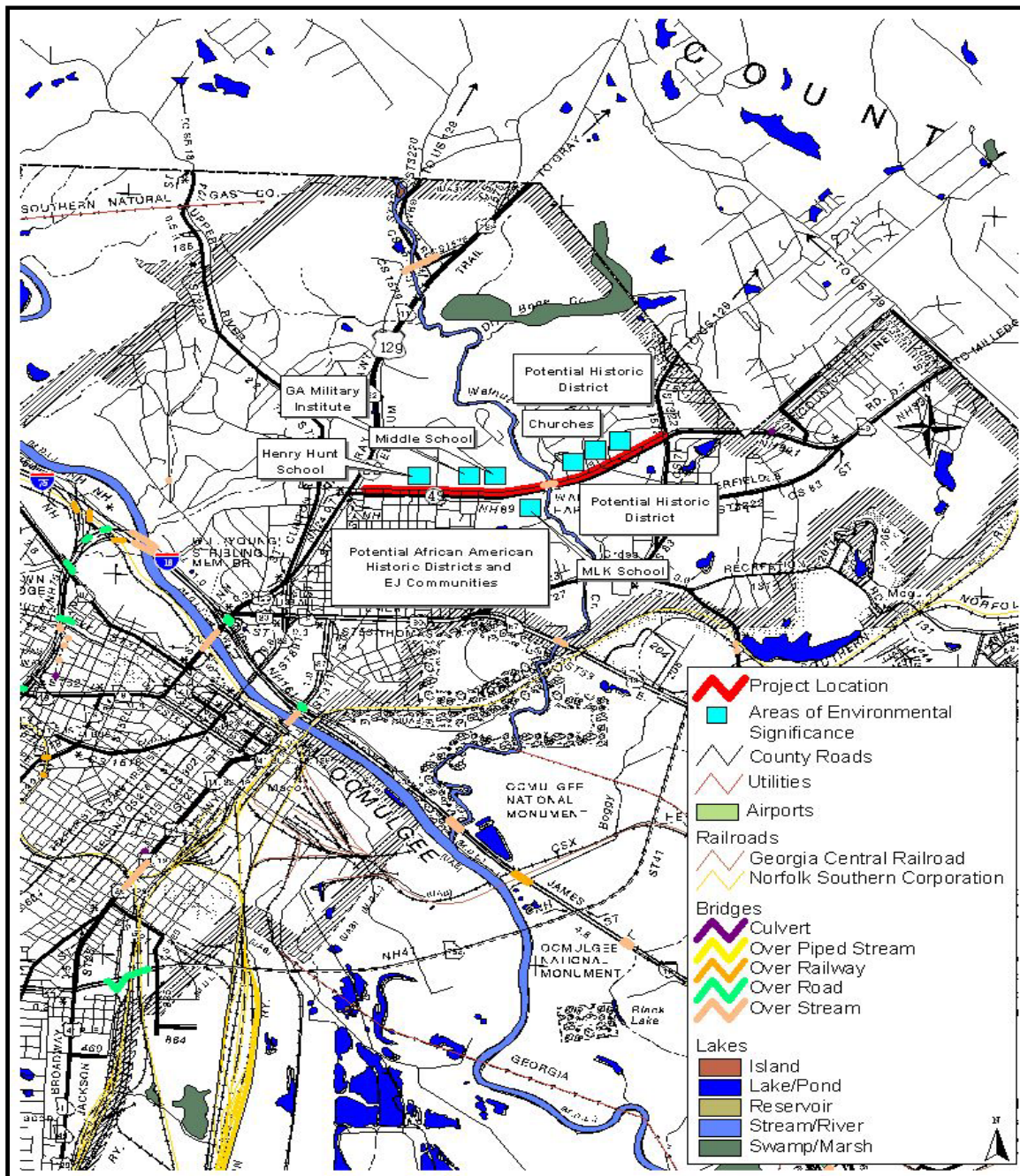




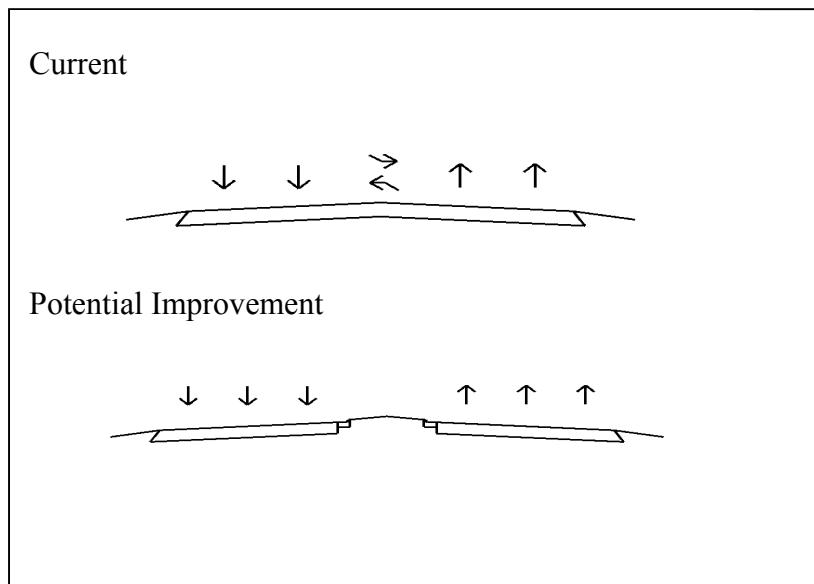


Photo of location



SR 49 looking west at pedestrian bridge near Appling Middle School

Typical Section\*



\* Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lanes w/ center turn lane urban section w/ sidewalks	6 lane divided urban section w/ sidewalks
Shoulder	Curb and Gutter	Curb and Gutter
Speed Design	45 mph	45 mph
Drainage	Enclosed longitudinal drainage	Same
Pavement	Asphalt – good condition	Per GDOT Standards
Signals	Maynard, Kitchens, Tredway, New Clinton Rd.	Same
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	SR 49/Shurling Dr. over Walnut Creek, pedestrian bridge over Shurling Dr. @ Appling Middle School to be replaced	Both to be replaced.



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Several African American Historic districts
Archaeology	To be determined during concept phase
Neighborhoods	
EJ Communities	Several African American neighborhoods (same as historic districts)
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	Georgia Military Institute
Parks and Recreation	School ball fields along roadway
Wetlands and Streams	Walnut Creek and two or three small tributaries
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Bibb
<b>Map Code</b>	79
<b>Route</b>	SR 49 (Shurling Drive)
<b>Location Description</b>	SR 49 N of Macon 1/2 mi E of US 129 travelling E for 1.7 mi
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/16/02

### Recommendation Description

Widen from 4 lanes w/ center turn lane to 6 lane divided

### Highway Widening

	Length (mi)	Width (ft)	Unit Cost (per mi)	Total
	1.7		\$2,774,520	\$4,716,684
Source of Unit Cost				
Year		FDOT 2000 Transportation Costs	\$2,569,000	
Adjustment to 2002		4% per year is growth factor of 1.08		

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
Shurling Dr over Walnut Creek	600	62	37,200	\$60	\$2,232,000
ped br over Sh Dr @ Appling Middle School to be replaced					<u>\$500,000</u>
Subtotal					\$2,732,000

### Signals

Maynard, Kitchens, Tredway, New Clinton Road	4	\$100,000	\$400,000
master			\$20,000
fiberoptic interconnect cable			\$50,000
Subtotal			\$470,000

### ITS

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial	1.7	30	269,280	6.18	\$275,000	\$1,700,000
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						\$450,000
Relocation						\$250,000
Damages						\$600,000
Subtotal						\$3,000,000
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$3,000,000
<u>Scheduling Contingency</u>						\$1,650,000
<u>Admn/Court Cost</u>						\$2,790,000
<u>Inflation Factor</u>						<u>\$2,976,000</u>
<u>Right of Way Total</u>						<b>\$10,416,000</b>

**Summary**

Highway	\$4,716,684	
Bridges	\$2,732,000	
Signals	\$470,000	
ITS		
Construction Subtotal	\$7,918,684	
CEI	\$791,868	10% of construction subtotal
Construction Estimate	\$8,710,552	construction subtotal plus CEI
Preliminary Engineering	\$791,868	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$10,416,000	
Utility Relocation	\$395,934	5% of construction subtotal
Total	\$20,314,355	





## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as both an urban principal arterial and an urban minor arterial. The 3 year accident rate from 1995-1997 for the urban principal arterial portion is 655 as compared to the statewide average of 586. The portion of the segment classified as an urban minor arterial has an accident rate of 598 as compared to the statewide average of 541. The current AADT is 40,200 and the current volume to capacity ratio is 2.61. With no improvement, the corridor is anticipated to have an AADT of 64,729 and a volume to capacity ratio of 4.33 by 2025, indicating severe congestion along the corridor. In 1998 the corridor operated at a LOS C and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS F without the project and a LOS D with the project in place. Implementation of this project will improve the LOS.				County		Bibb	
				Map Code		88	
				Route #		US 41	
				GDOT District		3	
				Cong. District		8	
				RDC		Middle Georgia	
				Length		1.5 miles	
				Mileposts			
From: US 129		To: I-75					
Year	1998	2025	Access Control	From: none To: none	STRAHNET	Yes	
Traffic Vol.:	40,200	64,700	1995-1997 3 year Accident Rate	655 urban principal arterial and 598 urban minor arterial.			
Truck %:	4%	4%	% Increase in Travel Speed	5%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen US 41 from four lanes w/ center turn lane to six lane divided and will include the addition/reconstruction of curb & gutter w/ sidewalks.  This is already a designed project that is in the Macon TIP, PI # 350560 STP-034-3 (24). However, the project is currently inactive.  The recommended system improvements include Closed Circuit Television (CCTV) monitoring with communication links to Macon/Bibb County/GDOT Transportation Control Center (TCC) to monitor traffic flow.  To reduce costs for this deployment, incremental costs could be shared with the ATMS Operations/Miscellaneous Improvements Project contained in the current Macon Area TIP. The ATMS Operations/Miscellaneous Improvements Project is currently funded at \$464,000 each year for FY 03 through FY 05 with the funding coming from Federal/State sources.							



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/federal	\$165,000
Right-of-Way	State/federal	\$1,500,000
Utilities	Local	\$0*
Construction	State/federal	\$5,880,000
<b>Project Cost</b>		<b>\$7,545,000</b>

## Location and Environmental Resource Map

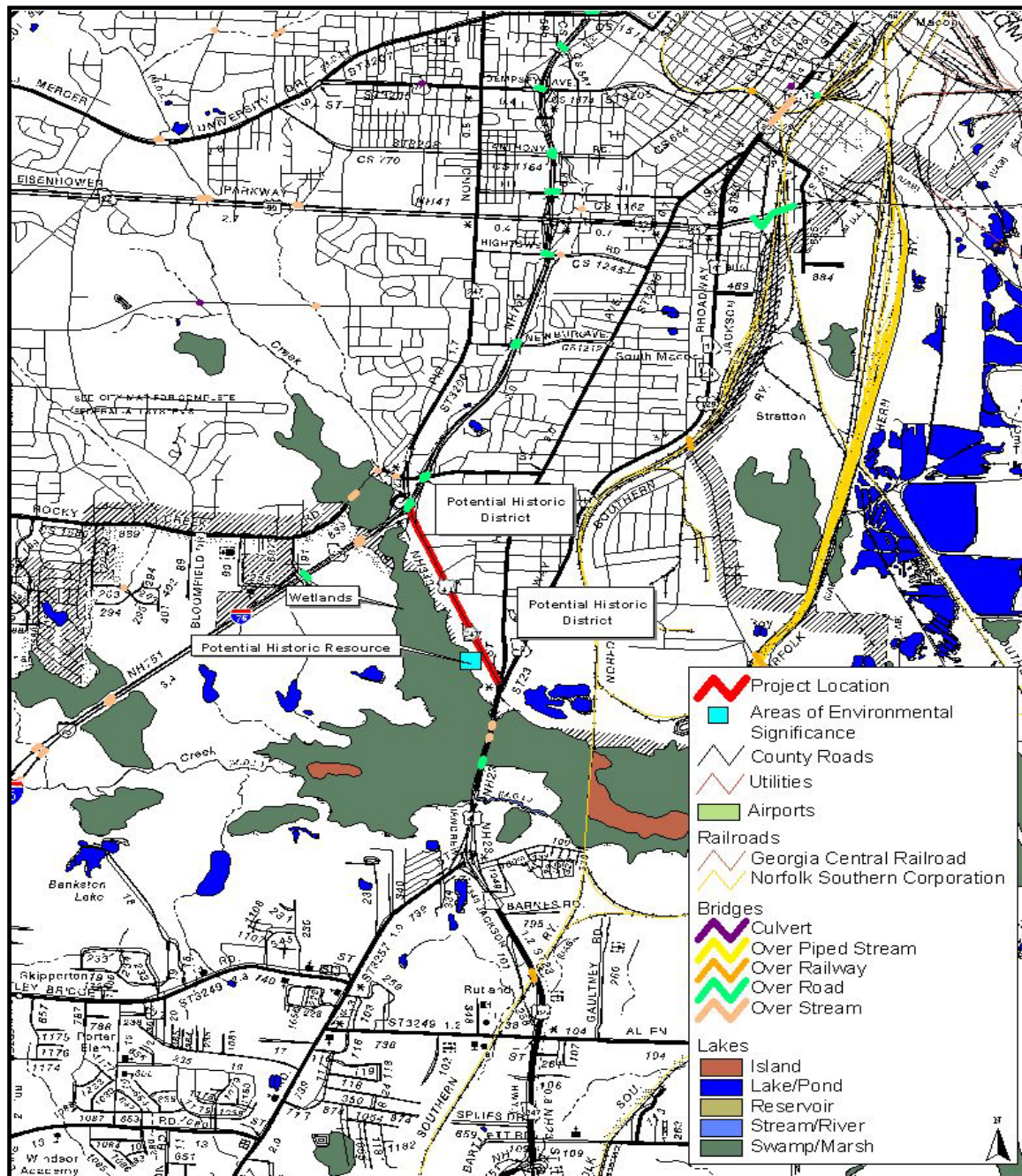


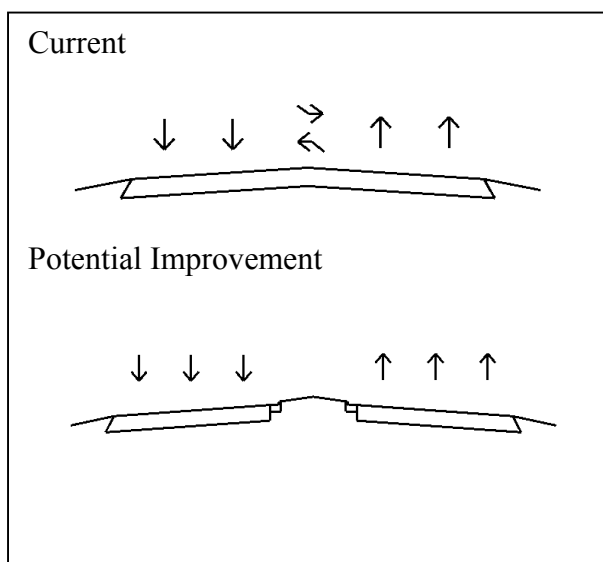


Photo of location



US 41 looking south, from south of I-75

Typical Section\*

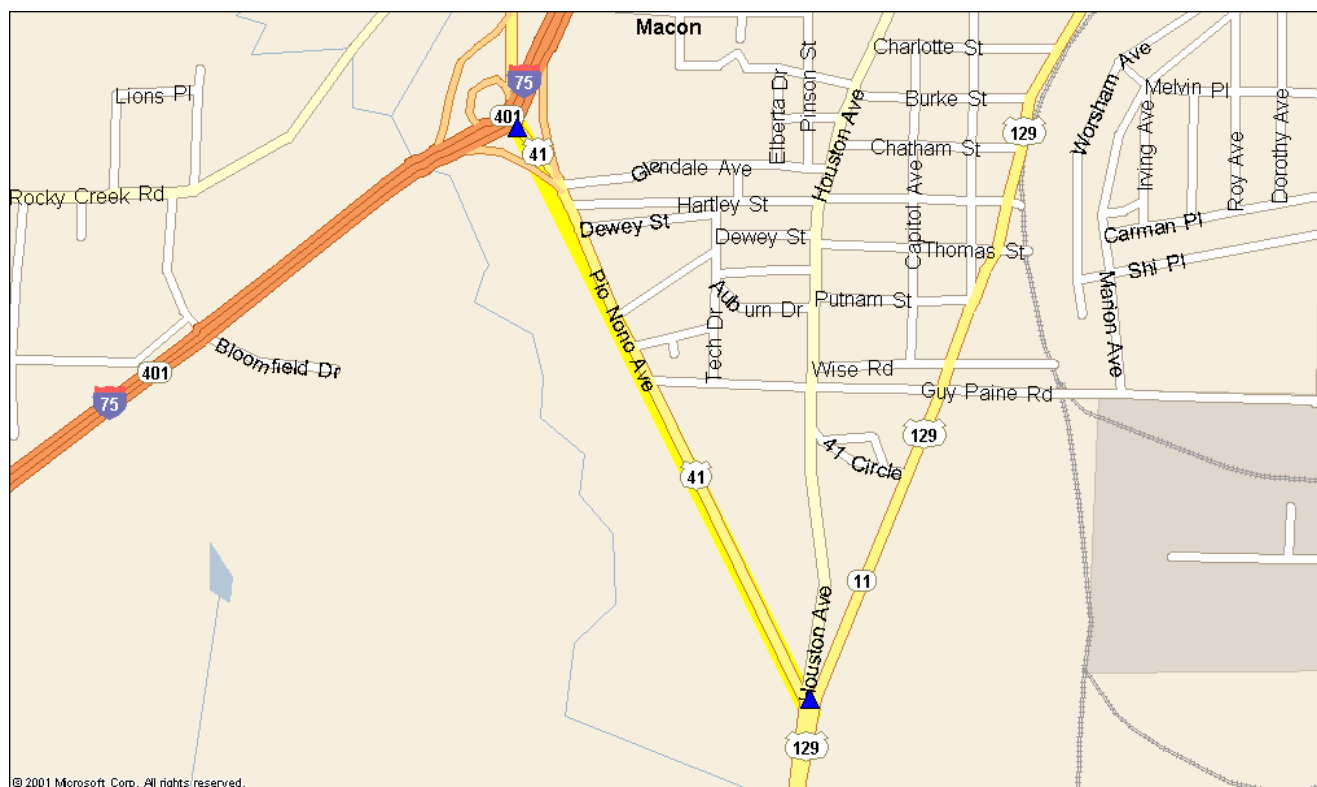


\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



Note to Map code 88: The location of the CCTV camera indicates the intersection which should be outfitted with CCTV cameras. Because most cameras are 360 degree, full tilt, the exact placement of the cameras is not that critical and is based on the site conditions. Usage of existing infrastructure will be used when possible to reduce costs.

#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane w/ center turn lane urban/ rural (no C&G in some areas)	6 lane divided urban
Shoulder	None	Curb and gutter with sidewalks
Speed Design	45 mph	45 mph
Observed Safety Concerns	Awkward configuration of US41/US129 intersection. Sharp curve through US129 intersection.	Current plan is to remove Houston Ave. from this intersection
Pavement	Adequate	Per GDOT Standards
Signals	US 129 (Broadway), Guy Paine Rd.	Additional signal @ relocated Houston Ave & Broadway
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV, fiber optic cable





## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two potential districts and one potential resource
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	African American business district along Houston Street
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Potential wetlands on west side of road
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Bibb	
<b>Map Code</b>	88	
<b>Route</b>	US 41	
<b>Location Description</b>	US 41 between US 129 and I-75	<b>See note on Page 2 of Estimate</b>
<b>Prepared By</b>	David Low	
<b>Date Last Updated</b>	11/12/02	

### Recommendation Description

Widen from 4 lanes w/ center turn lane to 6 lane divided.

### Highway Widening

Length (mi)	Width	Unit Cost	Total
1.5			

### Bridges

none	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
	0			\$60	\$0

### Signals

US 129 (Broadway), Guy Paine	2
Broadway at Houston Avenue relocation	1
master	
fiberoptic interconnect cable	
Subtotal	

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic loca	2		
Fiber Optic Cable Inst	1.2 mi.		

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial						
industrial	1.5	30	237,600	5.45		
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						

### Net Cost

### Scheduling Contingency

### Admn/Court Cost

### Inflation Factor

### Right of Way Total

**\$1,500,000**

**Summary**

Highway	\$0
Bridges	\$0
Signals	\$0
ITS	\$ -
Construction Subtotal	\$0

CEI \$0

Construction Estimate \$5,880,000

Preliminary Engineering \$165,000

Right of Way \$1,500,000

Utility Relocation \$0

Total \$7,545,000

**This estimate was provided by GDOT for an existing project located in Urban Design.**

Utilities cost was included in the Construction Estimate



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location has 10 percent trucks and therefore, is a freight focused corridor. This roadway segment is classified as both an urban and rural principal arterial. The 3 year accident rate from 1995-1997 for the urban portion is 1179 as compared to the statewide average of 586 for urban principal arterials. The 3 year accident rate for the rural segment is 9 as compared to the statewide average of 143 for rural principal arterials. The current AADT is 11,300 and the current volume to capacity ratio is .44. With no improvement, the corridor is anticipated to have and AADT of 18,635 and a volume to capacity ratio of .73 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS E and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS F without the project and a LOS B with the project in place. Implementation of the project will improve the LOS.				County		Bulloch	
				Map Code		98	
				Route #		US 301 Bypass	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		2.0 miles	
				Mileposts			
				From: US 80		To: SR 67	
Year	1998	2025	Access Control	From: partial To: partial	STRAHNET	No	
Traffic Vol.:	11,300	18,600	1995-1997 3 year Accident Rate	1179 urban principal arterial and 9 rural principal arterial			
Truck %:	10%	10%	% Increase in Travel Speed	0%	% Increase in Capacity	100%	
No. of Lanes	2	4	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen US 301 Bypass between US 80 and SR 67 from two lanes to four lanes divided.							



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$266,000
Right-of-Way	N/A	\$0
Utilities	Local	\$67,000
Construction	State/Federal	\$3,659,000
<b>Project Cost</b>		<b>\$3,992,000</b>

Location and Environmental Resource Map

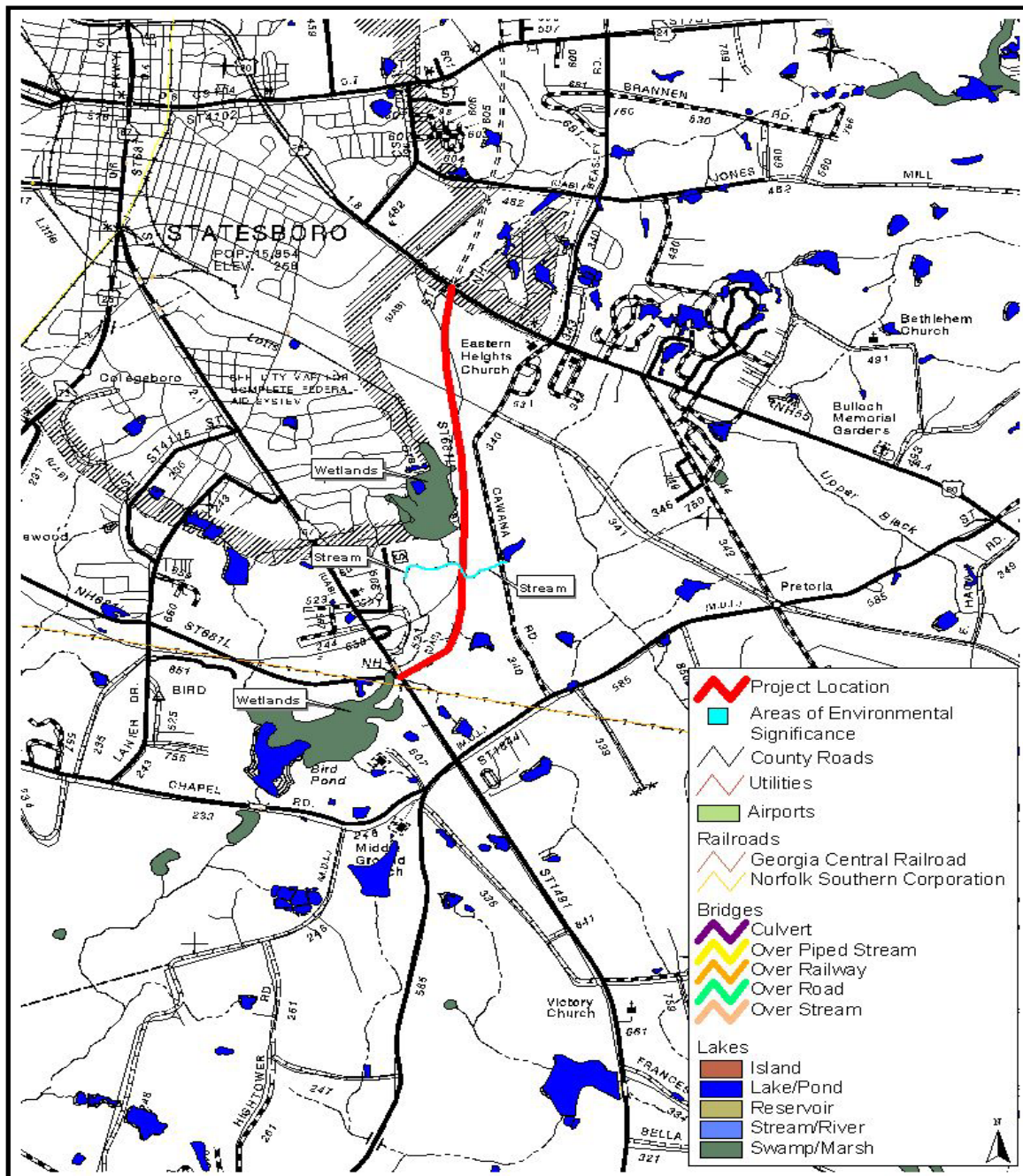




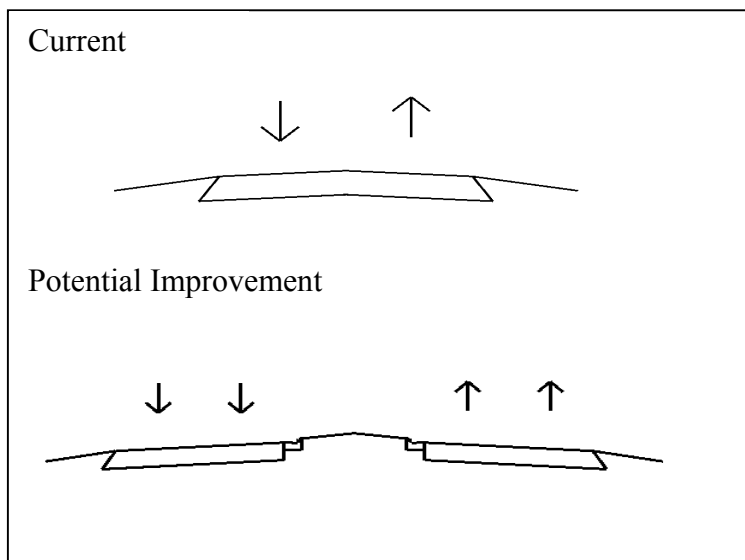


Photo of location



US 301 Bypass looking south from just south of US 80 Intersection

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	2 lane rural (graded for four lane divided)	4 lane divided rural
Shoulder	4' paved, 12' grass	4' inside paved, 12' outside paved
Speed Design	55 mph speed limit, 60 mph design speed	Same
Pavement	Asphalt	Same
Signals	US 80, SR 67	Same
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	None	None
Access Control	Partial access control	Partial access control



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	N/A
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Two wetlands north of SR 67 and an open water
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Bulloch
<b>Map Code</b>	98
<b>Route</b>	US 301 Bypass
<b>Location Description</b>	US 301 Bypass from US 80 to SR 67
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/16/02

### Recommendation Description

Widen from 2 lanes to 4 lane divided. Rough grading is already complete.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Method 1 - using FDOT unit costs</u>	2.0		\$1,563,322	\$3,126,643

Source of Unit Cost	FDOT 2000 Transportation Costs	\$1,809,400
Year	2000	
Adjustment to 2002	4% per year is growth factor of 1.08	

Cost Reduction Factor rough grading already complete: multiply by factor of 0.8

<u>Method 2 - using GDOT unit costs</u>	2.0	\$894,168	\$1,788,336
---	-----	-----------	-------------

Source of Unit Cost	GDOT 2002 Transportation Costs	\$1,117,710	less E&C (CEI)
Year	2002		

Cost Reduction Factor rough grading already complete: multiply by factor of 0.8

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
none			0	\$60	\$0

### Signals

US 80, SR 67	2	\$100,000	\$200,000
--------------	---	-----------	-----------

### ITS

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						
<u>Scheduling Contingency</u>						
<u>Admn/Court Cost</u>						
<u>Inflation Factor</u>						
<u>Right of Way Total</u>						\$0

**Summary**

Highway	\$3,126,643	
Bridges	\$0	
Signals	\$200,000	
ITS		
Construction Subtotal	\$3,326,643	
CEI	\$332,664	10% of construction subtotal
Construction Estimate	\$3,659,308	construction subtotal plus CEI
Preliminary Engineering	\$266,131	8% of construction subtotal includes 1% concept, 1% environmental document, 6% design
Right of Way	\$0	
Utility Relocation	\$66,533	2% of construction subtotal
Total	\$3,991,972	





## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

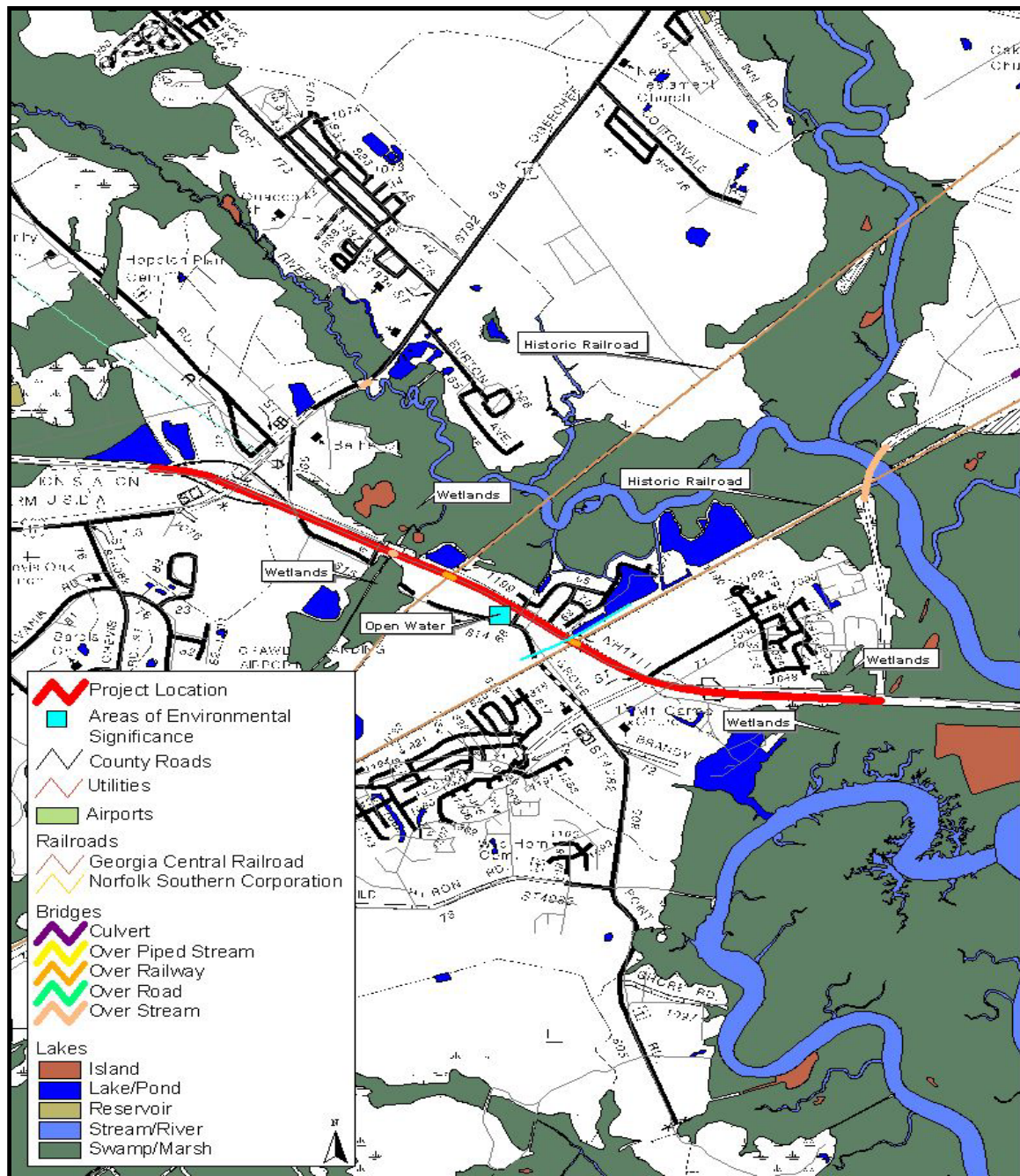
<b>NEED AND PURPOSE:</b> The purpose of the project is to reduce congestion and create a safer environment for freight movement. Significant traffic congestion exists on this thoroughfare route within the Savannah area. Freight flow is heavily impeded due to dense commercial and residential traffic. The described location is on STRAHNET and, therefore, is a freight focused corridor. The segment of roadway is classified as an urban principal arterial. The 3 year accident rate for this segment from 1995-1997 is 81 as compared with the statewide average of 586 for urban principal arterials. The current AADT is 1.37. With no improvement, the corridor is anticipated to have an AADT of 77,776 and a volume to capacity ratio of 2.28 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS D and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS F without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Chatham	
				Map Code		113	
				Route #		SR 204	
				GDOT District		5	
				Cong. District		1, 12	
				RDC		Coastal Georgia	
				Length		3.2 miles	
				Mileposts			
				From: US 17		To: Veterans Pkwy	
Year	1998	2025	Access Control	From: partial To: Controlled	STRAHNET	Yes	
Traffic Vol.:	47,600	77,800	1995-1997 3 year Accident Rate	81 urban principal arterial			
Truck %:	4%	4%	% Increase in Travel Speed	50%	% Increase in Capacity	162%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen SR 204 from four lane arterial with partial access control to six lane freeway with controlled access. Widen to the outside. Convert at-grade intersection at Georgetown Blvd. to an interchange and close median opening ½ mile west of Georgetown Blvd.  The system includes Closed Circuit Television (CCTV) monitoring, communication links to Savannah/Chatham County/GDOT Regional Transportation Control Center (TCC), and a dynamic message sign. The project involves inclusion into Savannah TCC to monitor traffic flow and provide traveler information to both automobile and truck traffic.  Other possible funding vehicles would be to share incremental costs with projects contained in the current Chatham County TIP. The ITS solutions recommended above could be a subset of the Savannah/Chatham County/GDOT Regional Transportation Control center. The cost of constructing the TCC is \$1 million with funding from Federal/State sources and is scheduled for Construction in FY 2005. (See Savannah TIP page 11).							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$1,642,000
Right-of-Way	N/A	\$8,461,000
Utilities	Local	\$1,313,000
Construction	State/Federal	\$18,060,000
<b>Project Cost</b>		<b>\$29,476,000</b>

### Location and Environmental Resource Map





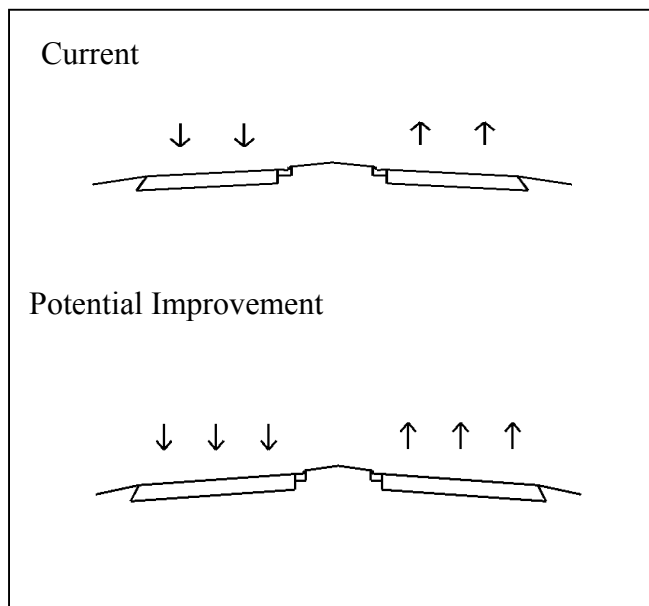
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



Looking west on SR 204 west of Georgetown Blvd.

Typical Section\*

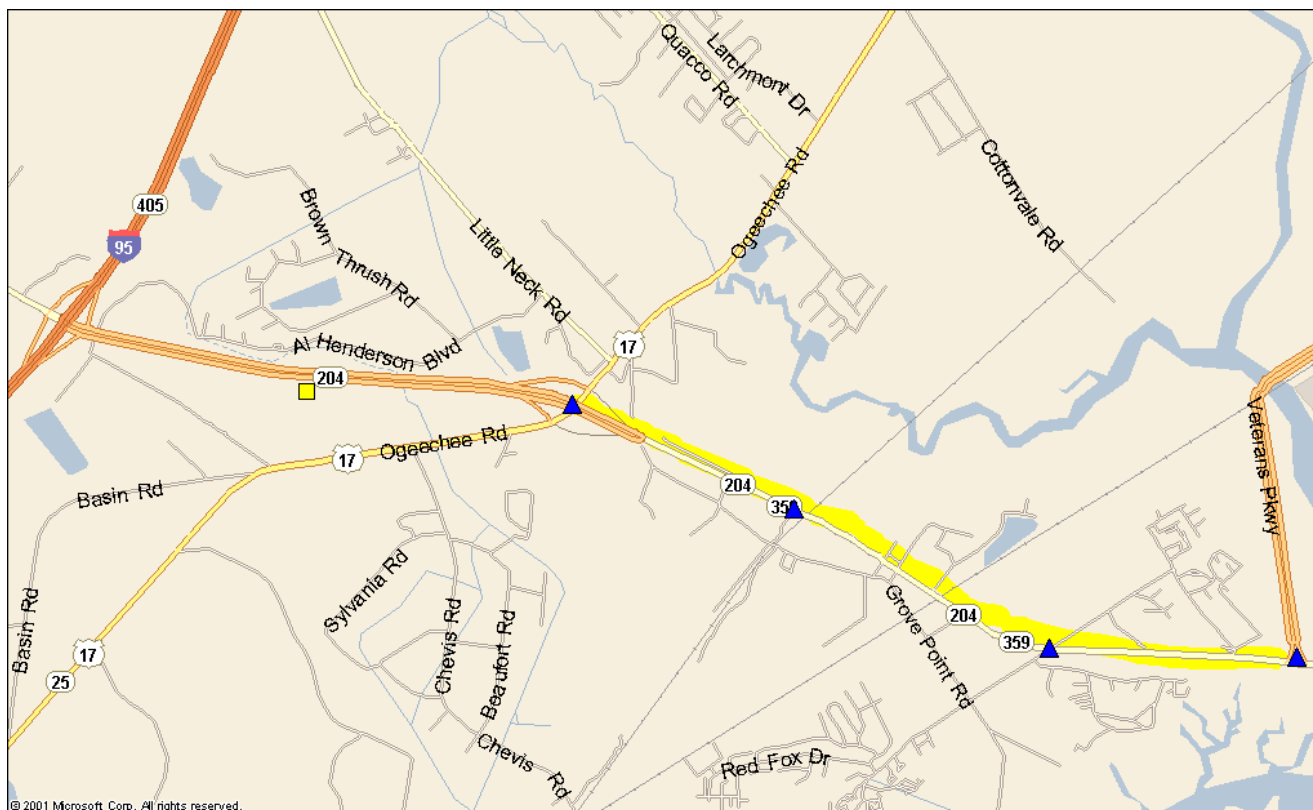


\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane divided with concrete median barrier	6 lane freeway with concrete median barrier
Shoulder	10' inside, 12' outside	Same
Speed Design	45 mph	55mph
Pavement	Asphalt	Same
Signals	Georgetown Blvd., and intersection ½ mile west	None (all freeway)
Signing and Marking	Per GODT Standards	Per GODT Standards
ITS Opportunities		CCTV
Bridges	Over RR west of Georgetown Blvd.	
Railroads	Bridge over railroad to be widened as part of this.	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two railroad crossings
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Various wetlands and one stream
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes



Recommendation Description Initial Cost Estimate

County Chatham  
Map Code 113  
Route SR 204  
Location Description SR 204 from US 17 to Veterans Parkway  
Prepared By David Low  
Date Last Updated 12/16/02

Recommendation Description

Widen and convert from 4 lane arterial with partial access control to 6 lane freeway with controlled access. Widen to the outside.  
Convert at-grade intersection at Georgetown Blvd. to an interchange and close median opening 1/2 mi west of Georgetown Blvd.

Highway Widening

	Length (mi)	Width	Unit Cost	Total
Segment 1 - widening	3.2		\$3,329,424	\$10,654,157
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,569,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	remove turn lanes for at-grade intersection: multiply by 1.2			
Segment 2 - interchange (including structures)				\$4,000,000
Source of Unit Cost	judgment			
Segment 3 - close median opening				\$150,000
Source of Unit Cost	judgment			
Subtotal				\$14,804,157

Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
over RR west of Georgetown Blvd.	300	24	7,200	\$60	\$432,000

Signals

George Blvd. Interchange ramps	2			\$100,000	\$200,000
master					\$20,000
fiberoptic interconnect cable					\$10,000
Subtotal					\$230,000

ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic loca	4	\$ 10,000	\$ 40,000
Fiber Optic Cable Inst	3 mi.	\$ 264,000 per mi.	\$ 792,000
Dynamic Message Sig	1	\$ 120,000	\$ 120,000
			<u>\$ 952,000</u>

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	3.2	24	405,504	9.31	\$200,000	\$1,861,818
Improvements Taken						\$200,000
Relocation						\$75,000
Damages						\$300,000
Subtotal						\$2,436,818
<u>Net Cost</u>						\$2,436,818
<u>Scheduling Contingency</u>						\$1,340,250
<u>Admn/Court Cost</u>						\$2,266,241
<u>Inflation Factor</u>						<u>\$2,417,324</u>
<u>Right of Way Total</u>						<b>\$8,460,633</b>

**Summary**

Highway	\$14,804,157	
Bridges	\$432,000	
Signals	\$230,000	
ITS	\$ 952,000	
Construction Subtotal	\$16,418,157	
CEI	\$1,641,816	10% of construction subtotal
Construction Estimate	\$18,059,972	construction subtotal plus CEI
Preliminary Engineering	\$1,641,816	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$8,460,633	
Utility Relocation	\$1,313,453	8% of construction subtotal
Total Cost	\$29,475,873	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

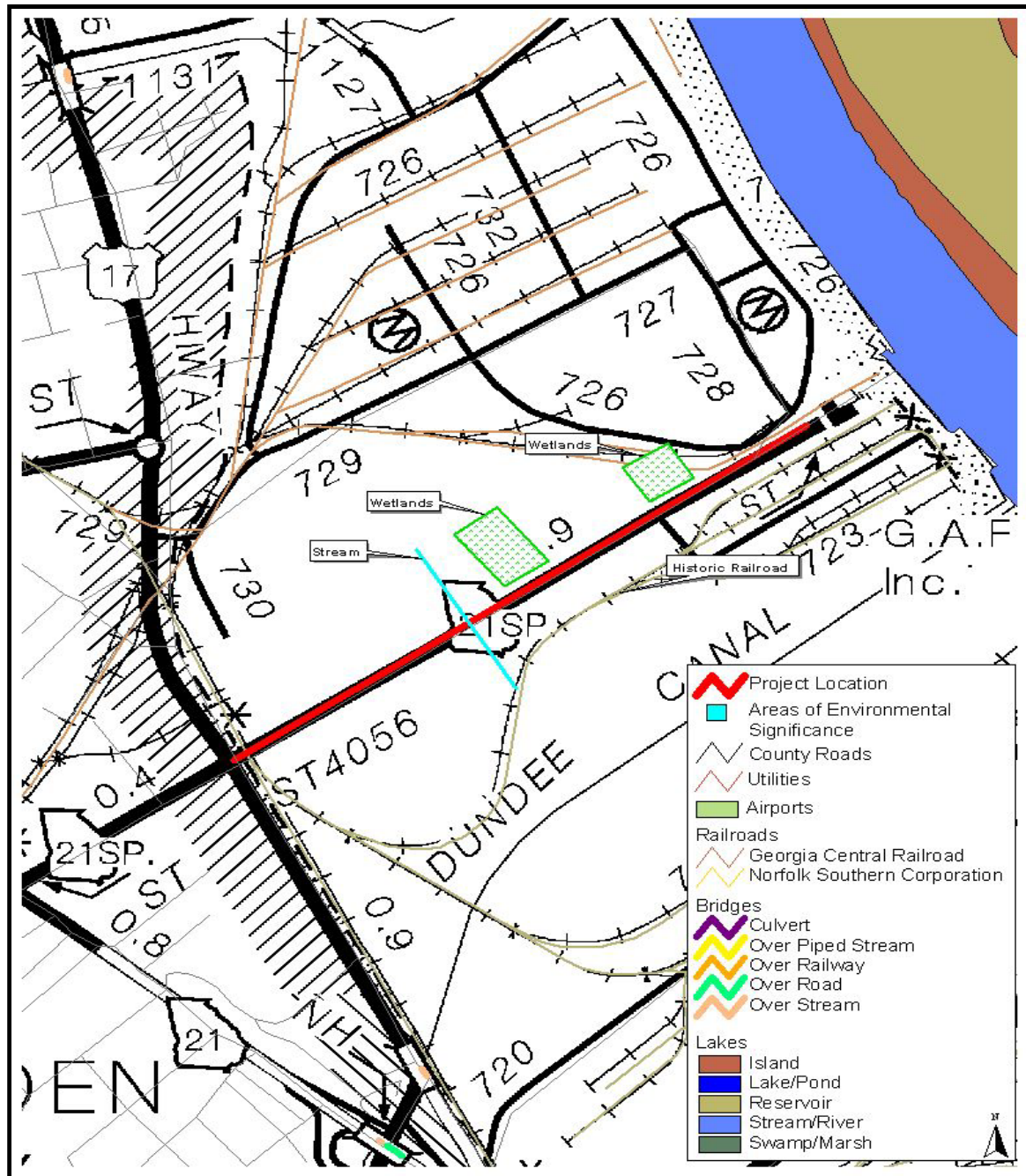
<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, has 90 percent trucks, and therefore, is a freight focused corridor. This roadway segment is classified as an urban collector. The 3 year accident rate from 1995-1997 is 390 as compared to the statewide average of 461 for urban collectors. This location also provides direct access to two gates of the Georgia Ports Authority which are primarily utilized by arriving and departing truck traffic. The current AADT is 9,100 and the current volume to capacity ratio is .8. With no improvement, the corridor is anticipated to have an AADT of 14,824 and a volume to capacity ratio of 1.32 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS F and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS F without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Chatham	
				Map Code		514	
				Route #		SR 21 Spur	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		1.0 mile	
				Mileposts			
From: SR 25E		To: end of road					
Year	1998	2025	Access Control	From: None To: None	STRAHNET	Yes	
Traffic Vol.:	9,100	14,800	1995-1997 3 year Accident Rate	390 urban collector			
Truck %:	90%	90%	% Increase in Travel Speed	5%	% Increase in Capacity	100%	
No. of Lanes	2	4	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen SR 21 Spur from two to four lanes with center turn lane from SR 25E to end of road.  Plans were prepared for Chatham County in 1985-86 to widen SR 21 Spur (Brampton Road) as part of Chatham County SPLOST. It has not been widened to date.  The project includes installation of Dynamic Message Signs (DMS), Highway Advisory Radio (HAR), closed circuit television (CCTV) monitoring, communication links to Savannah Ports Authority, and more visible static signs. The project involves inclusion into Savannah/Chatham County/GDOT Regional Transportation Control center to monitor port related traffic flow and provide traveler information to both automobile and truck traffic. This advance information can facilitate the re-routing of port traffic thereby reducing congestion on and around I-95 and I-16.  A series of 4 arterial dynamic message signs, 5 CCTV cameras and 3 HARs located at strategic locations (including at terminal gates) could provide trucker traffic information as well as provide trucker surveillance of lines/queues at terminal gates.  Incremental costs for this project can be shared with existing plans for Savannah Port connection as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019" Years 1 -5 (p 13).							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	NCPD	\$395,000
Right-of-Way	NCPD	\$7,680,000
Utilities	Local	\$593,000
Construction	NCPD	\$4,350,000
<b>Project Cost</b>		<b>\$13,018,000</b>

Location and Environmental Resource Map





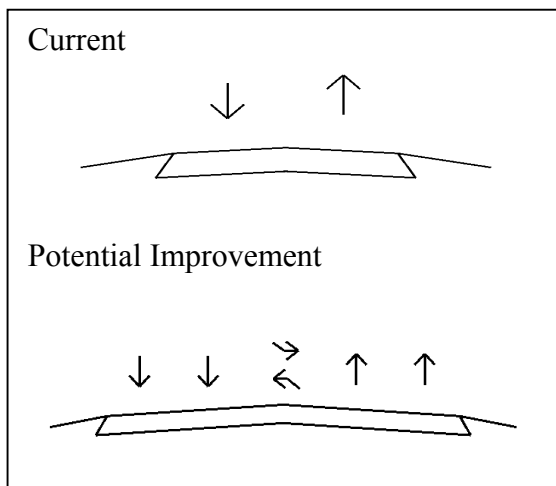
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



Looking southwest on SR 21 Spur from Georgia Port Authority Gate #3

Typical Section\*



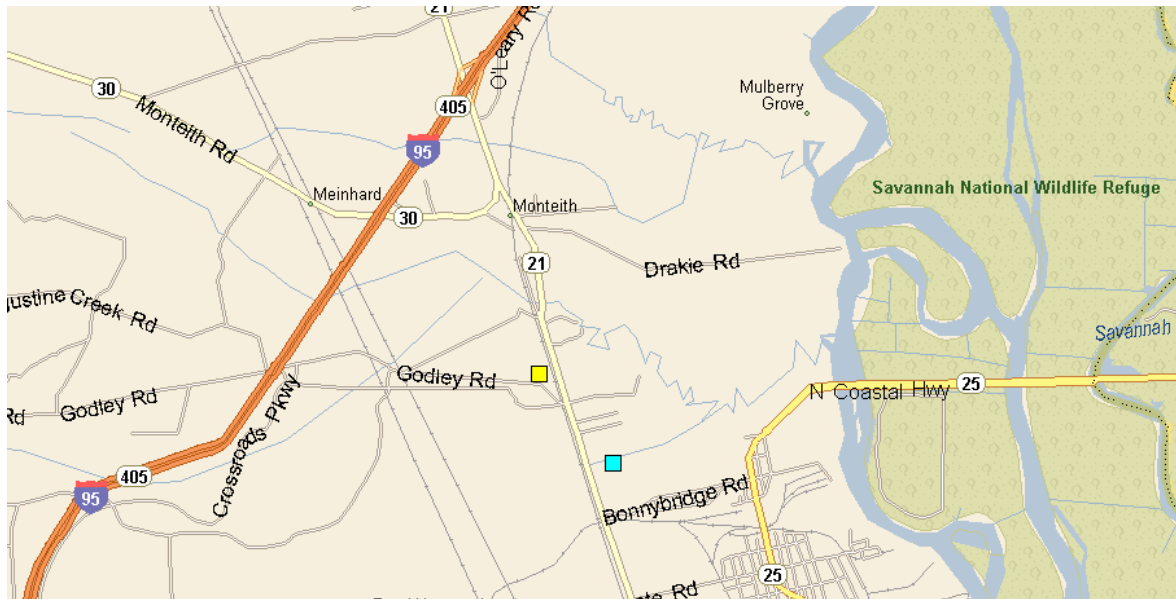
\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



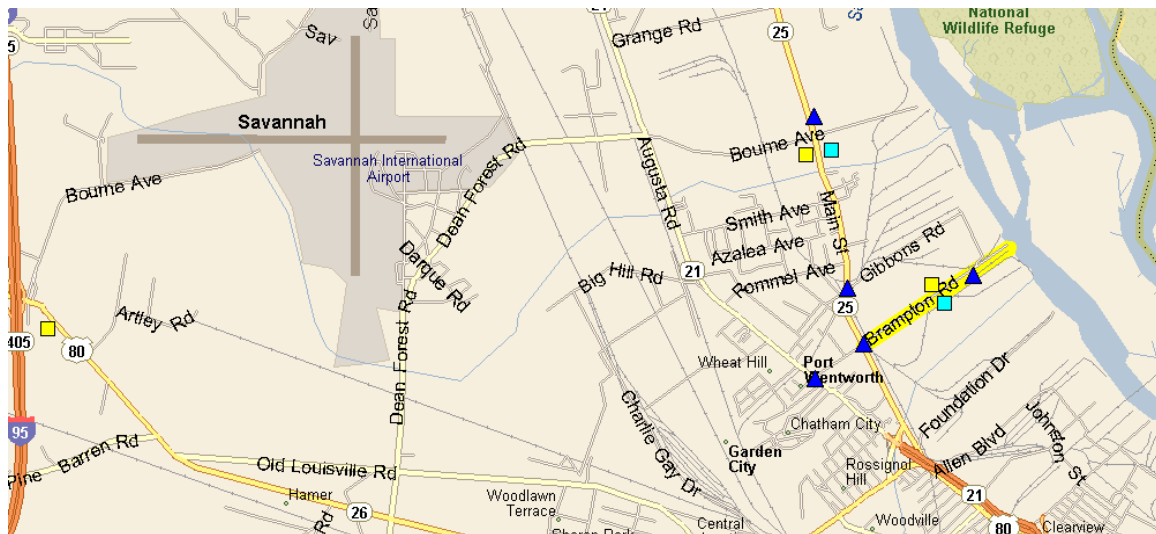
# Central Georgia HPC 6 Corridor Management Plan

## ITS Location Maps

Map 1



Map 2



### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed





## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	2 lane rural	4 lane rural w/ center turn lane
Shoulder	2' grass	14' paved plus 6' grass
Speed Design	40 mph	40 mph
Observed Substandard Design Features	Lack of adequate shoulders	
Drainage	Poorly formed ditches	
Pavement	Asphalt	PCC
Signals	SR 21 Spur at SR 25E	Same
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	Port related CMS approaching two gates
Bridges	None	None
Access Control	None	None other than by permit
Observed Existing Utilities	Gas pipeline crossing under Brampton Road	
Railroads	RR grade crossing just east of SR 25E (3 tracks)	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One railroad
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	One stream and two wetlands
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Chatham  
**Map Code** 514  
**Route** SR 21 Spur  
**Location Description** SR 21 Spur from SR 25E to end of road  
**Prepared By** David Low  
**Date Last Updated** 12/14/02

### Recommendation Description

Widen from 2 to 4 lanes with center turn lane

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1</u>	1.0		\$2,834,244	\$2,834,244
Source of Unit Cost		FDOT 2000 Transportation Costs	\$2,624,300	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
none			0	\$60	\$0

### Signals

SR 25E	1			\$100,000	\$100,000
--------	---	--	--	-----------	-----------

### Railroad Grade Crossings

concrete panels for three tracks					\$300,000
gates with longer arms					\$200,000
railroad signal modifications					<u>\$200,000</u>
Subtotal					\$700,000

### ITS

CCTV, DMS & HAR					\$320,000
-----------------	--	--	--	--	-----------

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial	1.0	40	211,200	4.85	\$250,000	\$1,212,121
residential					\$55,000	
Improvements Taken						\$400,000
Relocation						\$100,000
Damages						\$500,000
Subtotal						\$2,212,121
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$2,212,121
<u>Scheduling Contingency</u>						\$1,216,667
<u>Admn/Court Cost</u>						\$2,057,273
<u>Inflation Factor</u>						<u>\$2,194,424</u>
<u>Right of Way Total</u>						<b>\$7,680,485</b>

### Utility Relocation

Extend gas pipeline sleeve for road widening  
 Relocate gas substation

**Summary**

Highway	\$2,834,244	
Bridges	\$0	
Signals	\$100,000	
Railroad Grade Crossings	\$700,000	
ITS	\$320,000	
Construction Subtotal	\$3,954,244	
CEI	\$395,424	10% of construction subtotal
Construction Estimate	\$4,349,668	construction subtotal plus CEI
Preliminary Engineering	\$395,424	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$7,680,485	
Utility Relocation	\$593,137	15% of construction subtotal
Total Cost	\$13,018,714	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

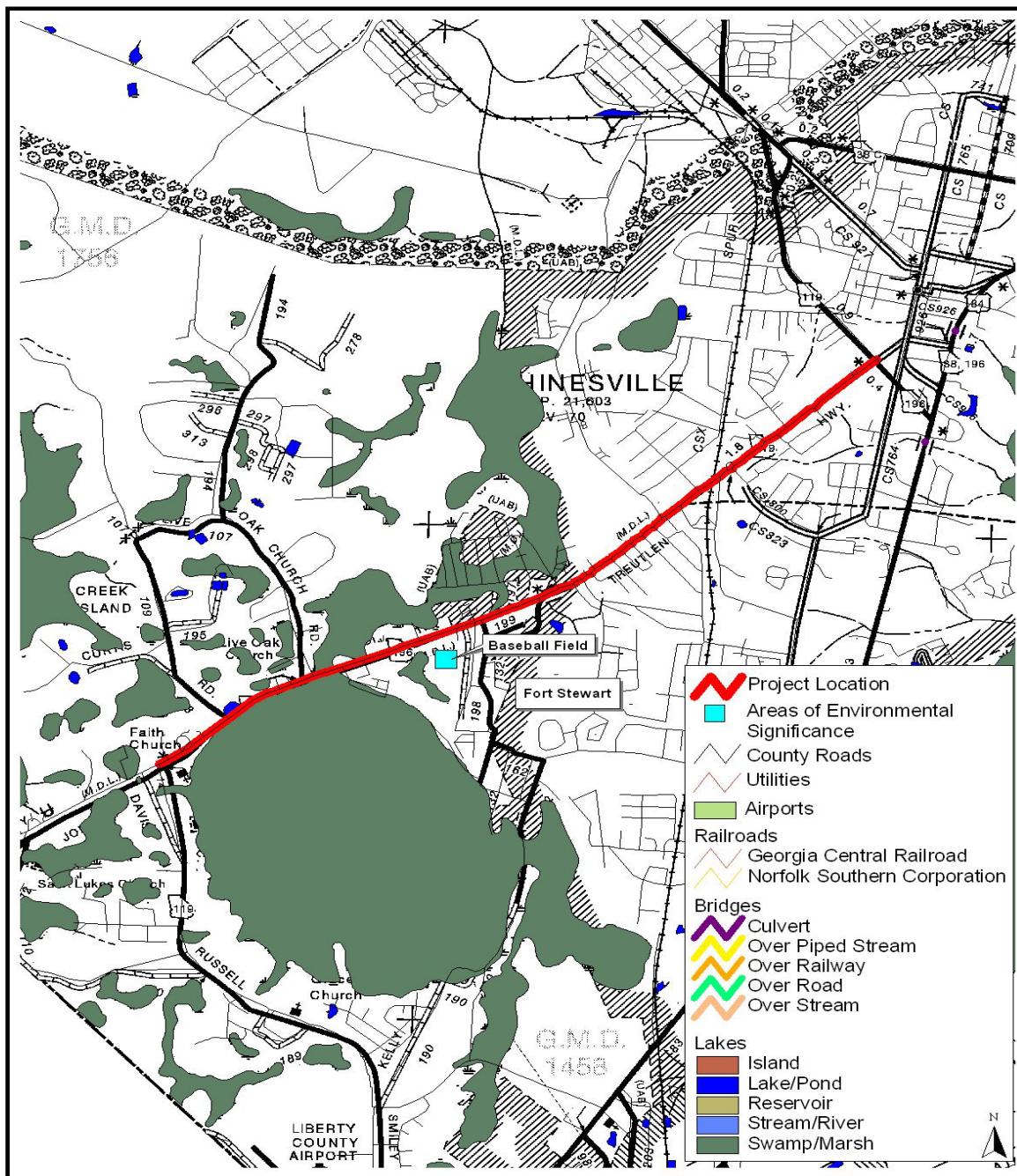
<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight and military movement. SR 119 is on STRAHNET and is a major access route into the Fort Stewart Army installation. This roadway segment is classified as a rural major collector and an urban collector. The 3 year accident rate from 1995-1997 for the rural major collector portion is 22 as compared to the statewide average of 196. The 3 year accident rate for the portion classified as an urban collector is 165 as compared to the statewide average of 541. The current AADT is 22,600 and the current volume to capacity ratio is .51. With no improvement, the corridor is anticipated to have an AADT of 34,186 and a volume to capacity ratio of .85 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS C without the project and a LOS B with the project in place. Implementation of this project will improve the LOS.				County		Liberty	
				Map Code		468	
				Route #		SR 119	
				GDOT District		5	
				Cong. District		1	
				RDC		Coastal Georgia	
				Length		2.5 miles	
				Mileposts			
				From: SW Intersection of SR 119 & SR 196		To: NE Intersection of SR 119 & SR 196	
Year	1998	2025	Access Control	From: none To: none	STRAHNET	Yes	
Traffic Vol.:	22,600	34,200	1995-1997 3 year Accident Rate	22 rural major collector 165 urban collector			
Truck %:	9%	9%	% Increase in Travel Speed	0%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen SR 119 from four and five lane urban section to six lane divided urban section with sidewalks, from ¼ mile SW of City limits (at Hollywood Drive) to SR 119/ SR 196 intersections in downtown Hinesville.							



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$776,000
Right-of-Way	State/Federal	\$14,409,000
Utilities	Local	\$776,000
Construction	State/Federal	\$8,532,000
<b>Project Cost</b>		<b>\$24,492,000</b>

## Location and Environmental Resource Map







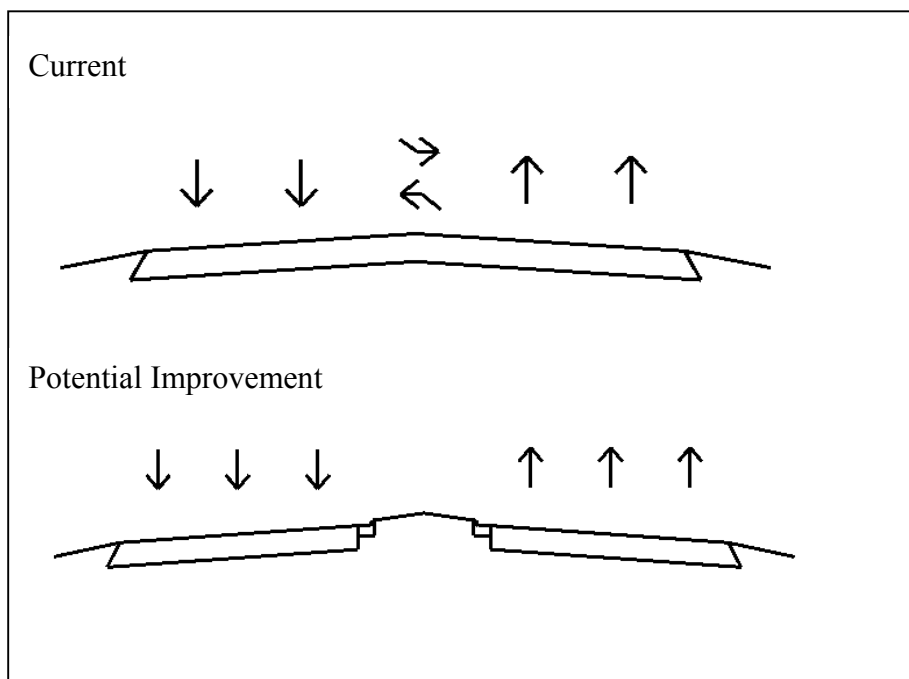
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



Looking southwest on SR 119/ SR 196 just southwest of SR 119/ SR 196 intersection

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 and 5 lane urban	6 lane divided urban with sidewalks
Shoulder	None (curb and gutter)	None (curb and gutter)
Speed Design	45 mph	Same
Observed Safety Concerns	Flashing beacon at Deal St. (potential signal), no two-way left turn lane NE of railroad crossing	Signal at Deal St.
Pavement	Asphalt	Per GDOT Standards
Signals	Frank Cochran Drive, SR 196	Same plus potential signal at Deal St.
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Railroads	Railroad grade crossing with concrete panels	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	N/A
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	Fort Stewart
Parks and Recreation	Baseball field
Wetlands and Streams	N/A
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	N/A
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Liberty
<b>Map Code</b>	468
<b>Route</b>	SR 119
<b>Location Description</b>	SR 119 in Hinesville from SR 196 east for 2.5 mi (common part of SR 119 and SR 196)
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/16/02

### Recommendation Description

Widen from 4 and 5 lane section to 6 lane divided urban section with sidewalks,  
from 1/4 mi SW of City Limits (at Hollywood Drive) to Sr 119/SR 196 intersection in downtown Hinesville.

### Highway Widening

	Length (mi)	Width (ft)	Unit Cost (per mi)	Total
	2.5		\$2,774,520	\$6,936,300
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,569,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

none	Length (ft)	Width (ft)	Area	Unit Cost	Total
			0	\$60	\$0

### Railroad Grade Crossing

extend concrete panels	\$100,000
gates with longer arms	\$200,000
railroad signal modifications	<u>\$150,000</u>
Subtotal	\$450,000

### Signals

Frank Cochran Drive, SR 196, potential signal at Deal Street	3	\$100,000	\$300,000
master			\$20,000
fiberoptic interconnect cable			<u>\$50,000</u>
Subtotal			\$370,000

### ITS

none

**Right of Way**

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial	1.8	30	285,120	6.55	\$275,000	\$1,800,000
commercial	0.7	45	166,320	3.82	\$275,000	\$1,050,000
industrial					\$250,000	
residential					\$55,000	
Land Subtotal						\$2,850,000
Improvements Taken						\$450,000
Relocation						\$250,000
Damages						\$600,000
Subtotal						\$4,150,000
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$4,150,000
<u>Scheduling Contingency</u>						\$2,282,500
<u>Admn/Court Cost</u>						\$3,859,500
<u>Inflation Factor</u>						\$4,116,800
<u>Right of Way Total</u>						<b>\$14,408,800</b>

**Summary**

Highway	\$6,936,300	
Bridges	\$0	
Railroad Grade Crossing	\$450,000	
Signals	\$370,000	
ITS		
Construction Subtotal	\$7,756,300	
CEI	\$775,630	10% of construction subtotal
Construction Estimate	\$8,531,930	construction subtotal plus CEI
Preliminary Engineering	\$775,630	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$14,408,800	
Utility Relocation	\$775,630	10% of construction subtotal
Total	\$24,491,990	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. Traffic congestion exists on this thoroughfare route within the Columbus area. Freight flow is heavily impeded due to dense commercial and residential traffic. The described location is on STRAHNET, has 19 percent trucks and, therefore, is a freight focused corridor. This roadway segment is classified as an urban expressway. The 3 year accident rate from 1995-1997 is 174 as compared to the statewide average of 225 for urban expressways. The current AADT is 37,800 and the current volume to capacity ratio ranges between .65 and .83 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 61,959 and a volume to capacity ratio ranging from 1.08 to 1.38 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS D and would have operated at a LOS C with the project in place. In 2025, the corridor will operate at a LOS F without the project and a LOS D with the project in place. Implementation of this project will improve the LOS.				County		Muscogee	
				Map Code		0	
				Route #		US 80	
				GDOT District		3	
				Cong. District		8,11, and 2	
				RDC		Lower Chattahoochee	
				Length		3.6 miles	
				Mileposts			
From: Alabama/Georgia State Line		To: I-185					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	37,800	62,000	1995-1997 3 year Accident Rate	174 urban expressway			
Truck %:	19%	19%	% Increase in Travel Speed	5%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen US 80 from four to six lanes from the Alabama/Georgia state line to I-185.  The system includes Closed Circuit Television (CCTV) monitoring with communication links to Columbus-Phenix City/GDOT Transportation Control Center (TCC) to monitor traffic flow. The Columbus TCC is scheduled for construction in FY03.  Incremental costs for this project can be shared with existing plans for Columbus Signal System and Communications upgrade as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019"  Other possible funding vehicles would be to share incremental costs with projects in the current Columbus-Phenix City TIP. The ITS Technologies contained in this project description could be a subset of these TIP projects. The projects are 1) the future ATMS/GDOT Regional TCC (ITS Center for TCC) in Columbus; and 2) the ITS components of the TCC. Funding for construction of the TCC in FY03 is \$1,100,000 from Federal and State sources. Funding for the ATMS components in FY03 is \$1,997,000 (\$1,598,000 from Federal sources and \$399,000 from State sources).							





Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$1,361,000
Right-of-Way	N/A	\$0
Utilities	Local	\$1,089,000
Construction	State/Federal	\$14,970,000
<b>Project Cost</b>		<b>\$17,420,000</b>

## Location and Environmental Resource Map

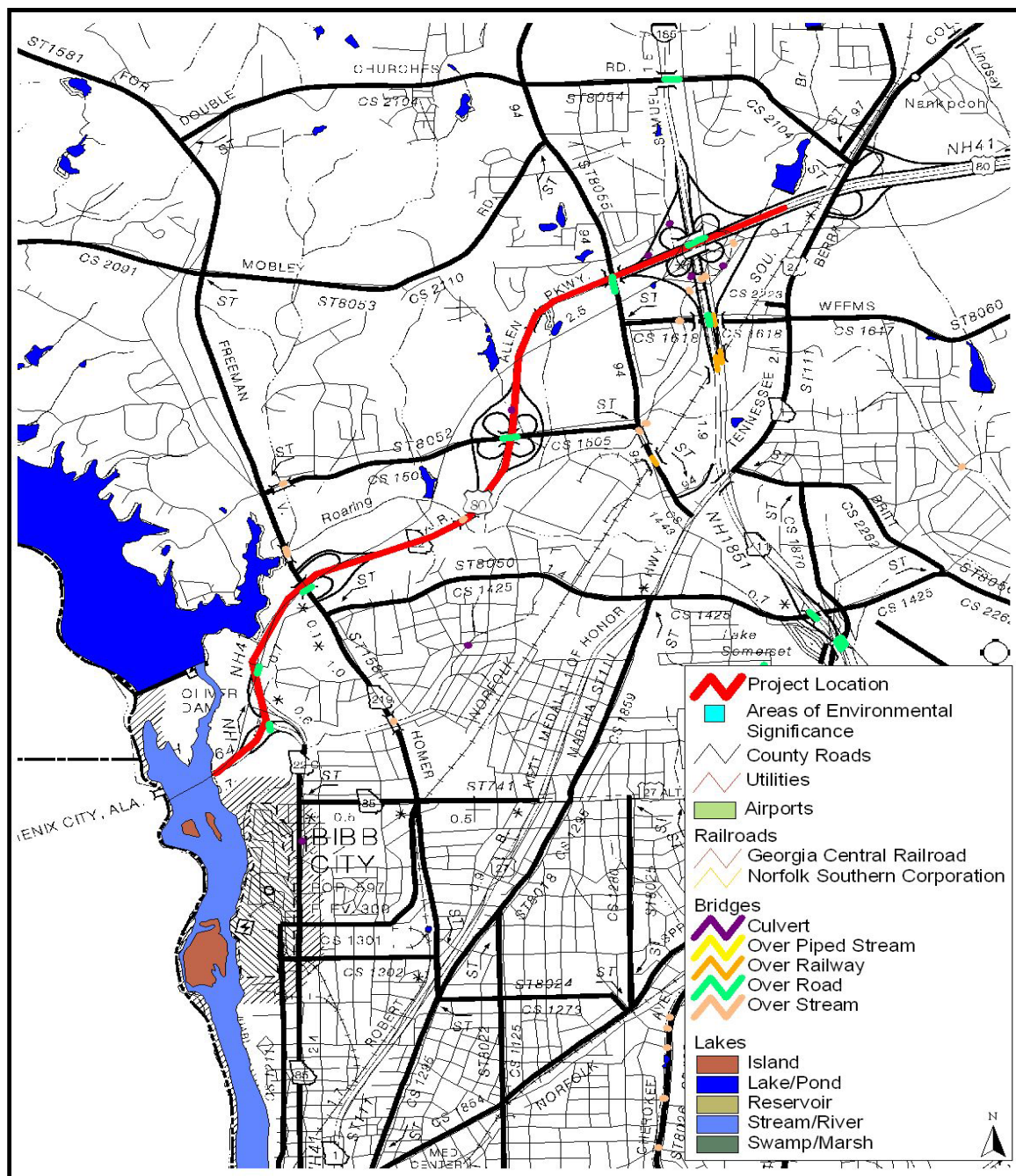


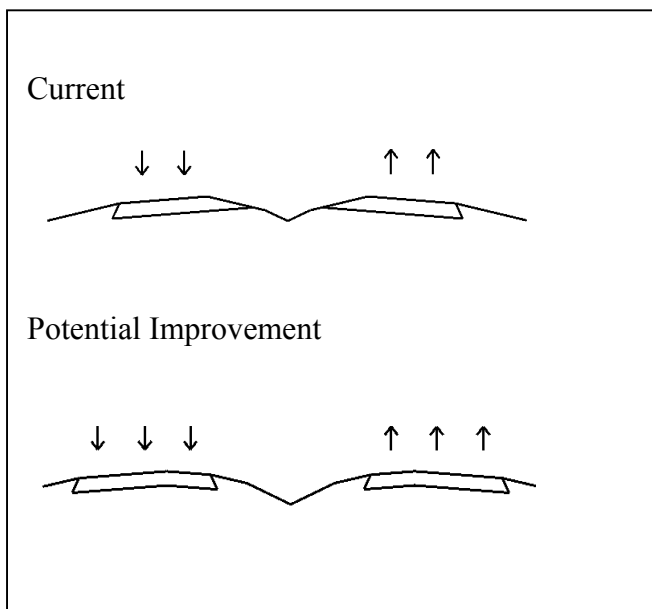


Photo of location



US 80 in Muscogee County

Typical Section\*

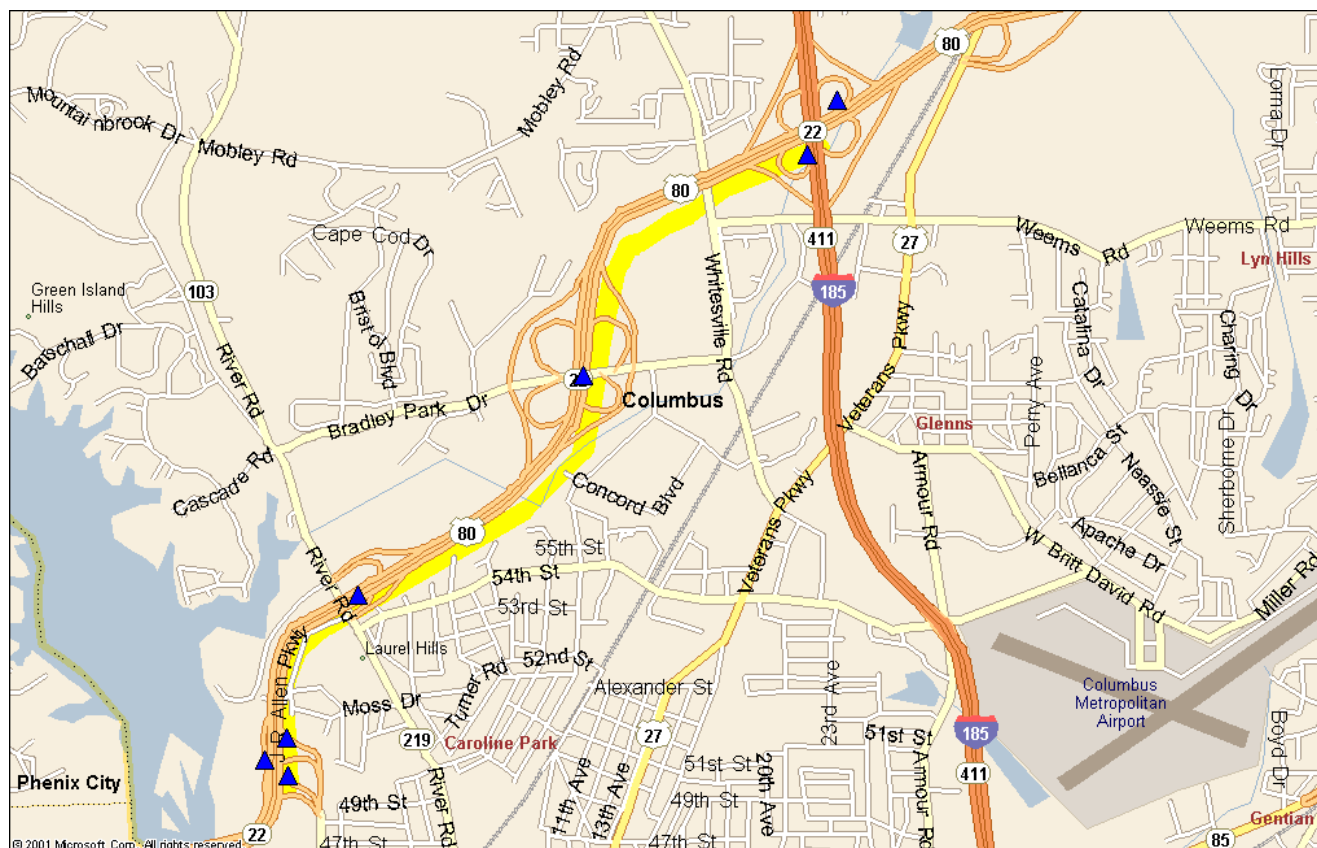


\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



Note for Map Code 0: The SR80/SR22/SR22C interchange, for which three CCTV cameras are recommended, will need the additional cameras because the area is heavily wooded and each camera has a limited site distance. In order to provide complete visual coverage of the area three cameras are necessary. The I-185/SR80 interchange would benefit from an additional camera to allow simultaneous monitoring of traffic flows at this interchange. Use of existing infrastructure will be used when possible to reduce costs.

#### LEGEND

— - Project Location

▲ - CCTV (Closed Circuit Television) - Proposed

▲ - Dynamic Fog Detection System - Proposed

● - DMS (Dynamic Message Sign) - Already Installed

■ - DMS (Dynamic Message Sign) - Proposed

■ - HAR (Highway Advisory Radio) - Proposed

■ - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane with 44' grass median	6 lane freeway w/ median (possible concrete barrier)
Shoulder	10' outside, 2' inside	
Speed Design	70 mph	70 mph
Pavement	Portland Cement Concrete roadway, asphalt shoulders	Portland Cement Concrete roadway and shoulders
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV
Bridges	SR 219, Bradley Park Drive, Whitesville Road, I-185	
Other Major Structures	Bridge to Alabama	
Access Control	Controlled	Controlled
Observed Existing Utilities	Transmission line	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	N/A
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	N/A
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	N/A
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Muscogee  
**Map Code** 0  
**Route** US 80  
**Location Description** US 80 from 0.6 mi. SW of SR 22 to I-185  
**Prepared By** David Low  
**Date Last Updated** 12/15/02

**Recommendation Description**  
 Widen from 4 to 6 lanes in the median

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	3.6		\$2,774,520	\$9,988,272
Source of Unit Cost			\$2,569,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
over SR 219	200	41	8,200	\$60	\$492,000
over Bradley Park Drive	200	41	8,200	\$60	\$492,000
over Whitesville Road	200	41	8,200	\$60	\$492,000
over I-185	500	41	20,500	\$60	\$1,230,000
Subtotal					\$2,706,000

### Signals

none

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic locations	7	\$ 10,000	\$ 70,000
Fiber Optic Cable Installed Urban	3.2 mi.	\$ 264,000 per mi.	\$ 844,800
Subtotal			\$ 914,800

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential			0	0.00	\$55,000	\$0
Improvements Taken						\$0
Relocation						\$0
Damages						\$0
Subtotal						\$0
<u>Rural</u>						
Land			0	0.00	\$10,000	\$0
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$0
<u>Net Cost</u>						\$0
<u>Scheduling Contingency</u>						\$0
<u>Admn/Court Cost</u>						\$0
<u>Inflation Factor</u>						\$0
<u>Right of Way Total</u>						\$0



**Summary**

Highway		\$9,988,272	
Bridges		\$2,706,000	
Signals			
ITS	\$	914,800	
Construction Subtotal		\$13,609,072	
CEI		\$1,360,907	10% of construction subtotal
Construction Estimate		\$14,969,979	construction subtotal plus CEI
Preliminary Engineering		\$1,360,907	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way		\$0	
Utility Relocation		\$1,088,726	8% of construction subtotal
Total Cost		\$17,419,612	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

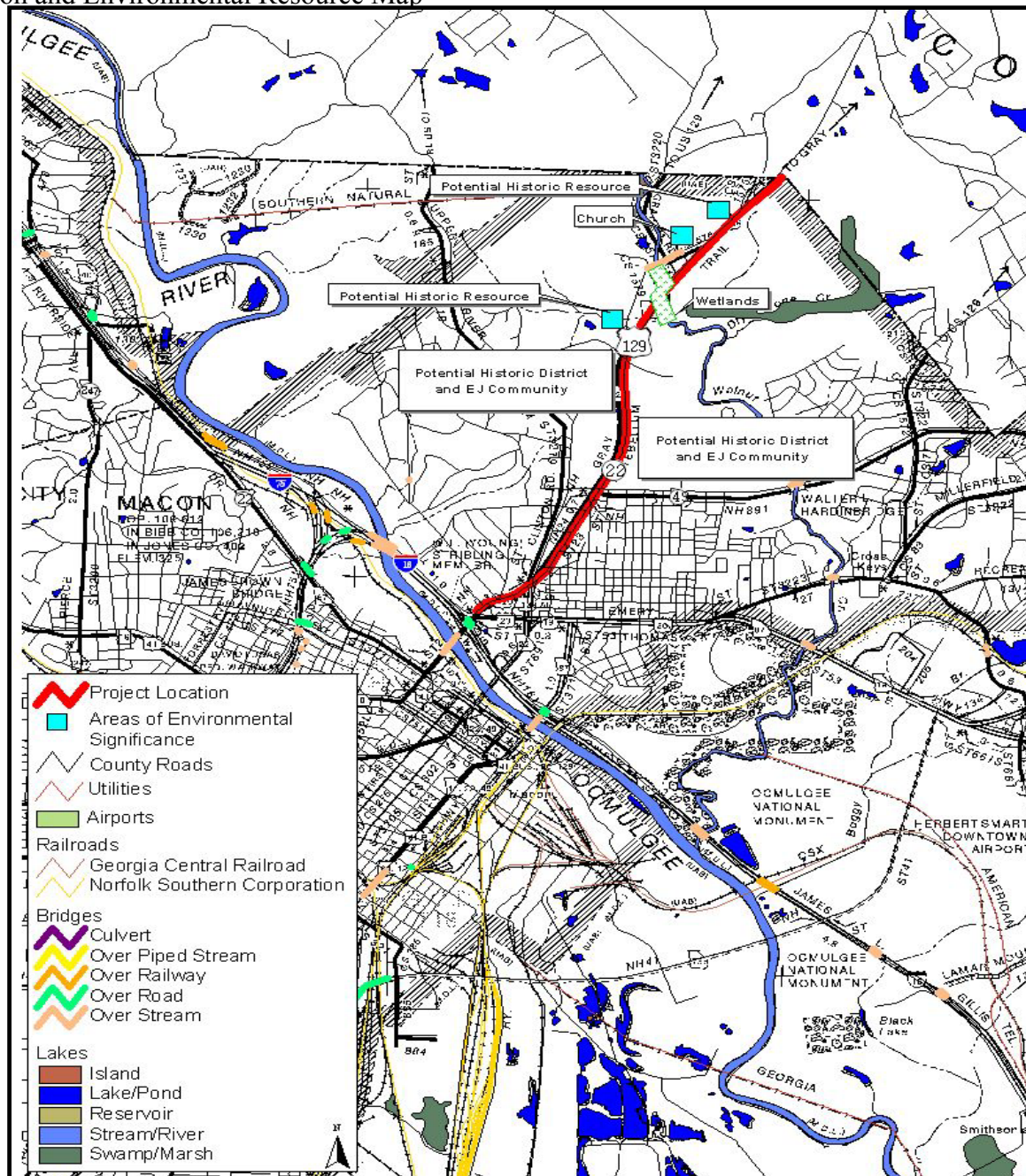
<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as an urban principal arterial. The 3 year accident rate from 1995-1997 is 678 as compared to the statewide average of 586 on urban principal arterials. The current AADT is 27,900 and the current volume to capacity ratio ranges between .69 and 1.13 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 46,179 and a volume to capacity ratio ranging from 1.14 to 1.88 by 2025, indicating congestion along the corridor. In 1998 the segment operated at LOS B and would have operated at a LOS A from US 23 to SR 49 with the project in place. In 2025, the corridor from US 23 to SR 49 will operate at a LOS C without the project and a LOS B with the project in place. From SR 49 to North Graham Rd. the corridor will operate at a LOS D without the project and at a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Bibb	
				Map Code		83	
				Route #		US 129	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Georgia	
				Length		3.5 miles	
				Mileposts			
From: US 23/Emery Hwy		To: ½ mi N of N Graham Rd					
Year	1998	2025	Access Control	From: None To: None	STRAHNET	Yes	
Traffic Vol.:	27,900	46,200	1995-1997 3 year Accident Rate	678 urban principal arterial			
Truck %:	4%	4%	% Increase in Travel Speed	5%	% Increase in Capacity	33% to 50%	
No. of Lanes	Varies (4 to 6)	Varies (6 to 8)	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen US 129 from six lanes undivided to eight lanes divided from US 23 to SR 49 (Shurling Drive). Widen US 129 from four lanes divided to six lanes divided from SR 49/Shurling Dr. to ½ mile North of North Graham Road. Construct a northbound acceleration/ taper lane from SR 49 (Shurling Drive) for ½ mile north.  Four closed circuit television (CCTV) units are proposed along the corridor, including fiber optic cable installation. The system will include communication links to the Macon/ Bibb County/ GDOT Transportation Control Center (TCC) to monitor traffic flow. To reduce costs for this deployment, costs could be incorporated into the ATMS Operations/ Miscellaneous Improvements project in the current Macon Area TIP, currently funded at \$464,000 each year for FY 03 through 05.  Several other projects are planned for this area. The I-16 improvement project (PI # 311000, 311005, 311400, 311410) will add full ramps to 2nd Street, which will divert some traffic from the US 129 (Spring St/North Ave.) interchange.							



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$1,331,000
Right-of-Way	State/Federal	\$26,822,000
Utilities	Local	\$1,997,000
Construction	State/Federal	\$14,645,000
<b>Project Cost</b>		<b>\$44,795,000</b>

Location and Environmental Resource Map





## Central Georgia HPC 6 Corridor Management Plan

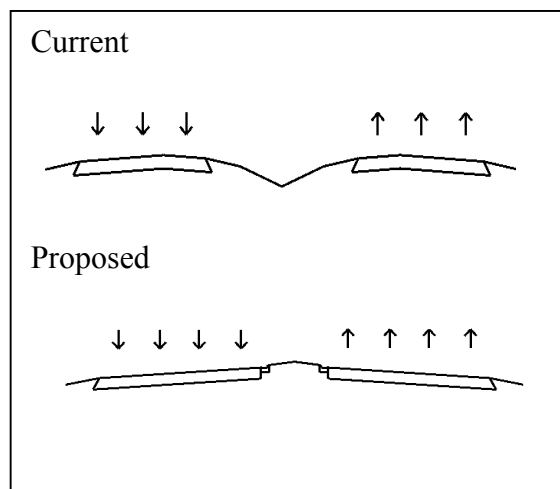
Photo of location



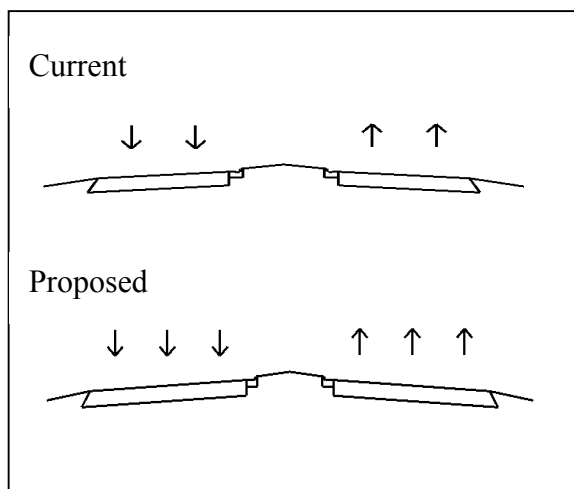
US 129/Gray Highway looking north, taken on the rural section north of Macon

### Typical Sections\*

US 23 to SR 49/Shurling Drive



½ mile North of SR 49/Shurling Dr. to ½ North of North Graham Road

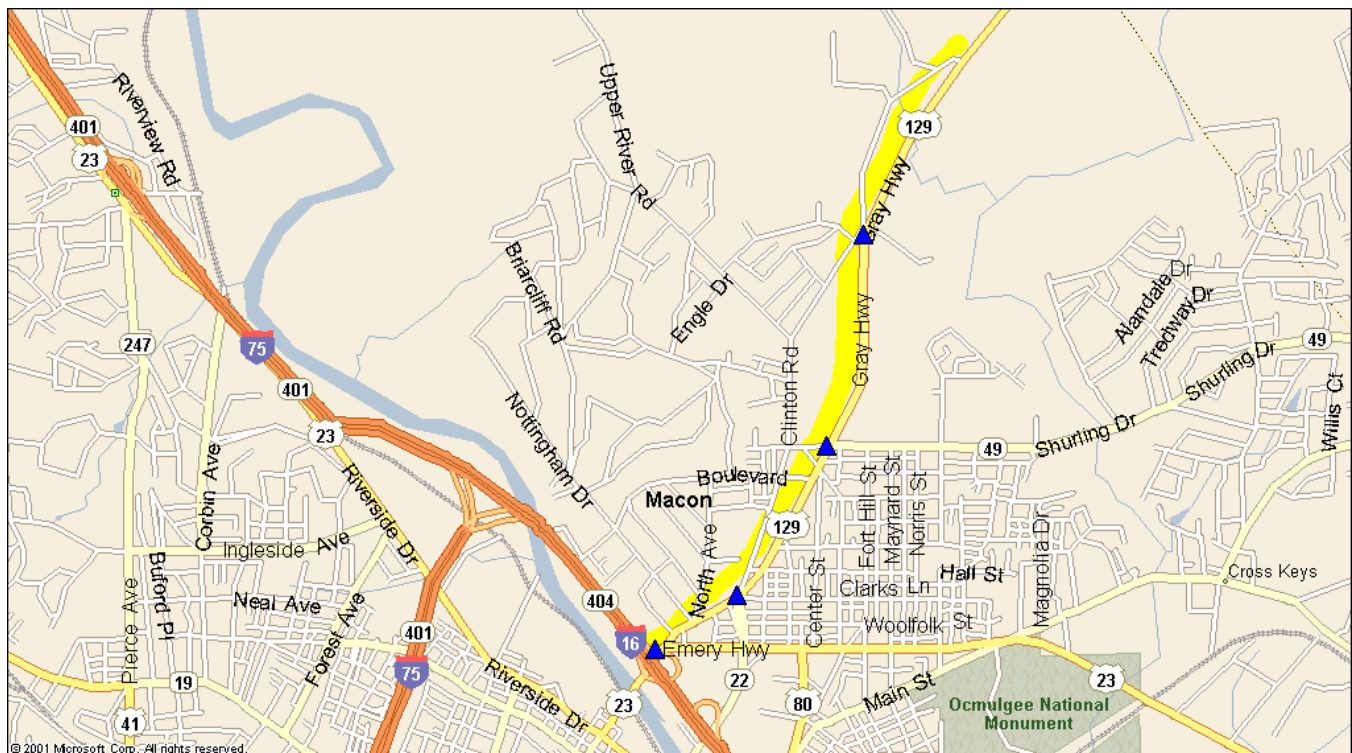


\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing		Proposed	
Location	US 23 to SR 49 (Shurling Drive)	½ mile North of SR 49/Shurling Dr. to ½ mile North of North Graham Road	US 23 to SR 49 (Shurling Drive)	½ mile North of SR 49/Shurling Dr. to ½ mile North of North Graham Road
Typical Section	6 lane undivided urban	4 lane divided rural	8 lane divided urban with sidewalks	6 lane divided rural (with accel/ taper lane northbound fm US49 for ½ mi N)
Shoulder	Curb and gutter	None inside 6' paved outside	Curb and gutter	4' paved inside 12' paved outside
Design Speed	45 mph - maybe less	55 mph	45 mph	65 mph
Pavement	Adequate	Adequate	Per GDOT Standards	Per GDOT Standards
Observed Substandard Design Features	Vertical alignment from North Ave. to N. of 2 <sup>nd</sup> St.	Inadequate shoulders, clear zone, ditches	Improve vertical alignment	Improve shoulders, clear zone and ditches
Observed Safety Concerns	none	High speeds with inadequate clear zone	none	Improve clear zone
Drainage	Enclosed longitudinal	Ditches	Same	Same
Signals	Emery Hwy, I-16 EB exit, 2 <sup>nd</sup> St., North Ave	SR 49, Walmart	Same	Same
Signing and Marking	Per GDOT Standards	Per GDOT Standards	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None	CCTV	CCTV
Bridges	none	Walnut Creek	none	Widen bridge





## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two potential districts and two potential resources
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	Two potential communities (same as two potential historic districts)
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Walnut Creek and associated wetlands both sides of road
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Project Initial Cost Estimate

<b>County</b>	Bibb/Jones
<b>Map Code</b>	83
<b>Route</b>	US 129
<b>Location Description</b>	US 129 from I-16 to first N Bibb Co line
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	11/11/02

### Project Description

Widen and reconstruct from 6 lane undivided urban to 8 lane divided urban section from I-16 to 1/2 mi N of SR 49 (Shurling Drive).  
Widen from 4 lane divided rural to 6 lane divided rural from 1/2 mi N of SR 49 to 1/2 mi N of Graham Road.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1</u>				
urban section: I-16 to 1/2 mi N of SR 49	1.3		\$3,497,126	\$4,546,264

Source of Unit Cost	FDOT 2000 Transportation Costs	\$2,698,400
Year	2000	
Adjustment to 2002	4% per year is growth factor of 1.08	

Added Difficulty Factor improve vertical alignment from North Avenue to N of Second Street: multiply by 1.2

<u>Segment 2</u>				
rural section: 1/2 mi N of SR 49 to 1/2 mi N of G	2.2		\$3,576,830	\$7,869,027

Source of Unit Cost	FDOT 2000 Transportation Costs	\$2,547,600
Year	2000	
Adjustment to 2002	4% per year is growth factor of 1.08	

Added Difficulty Factor improve inadequate shoulders, provide adequate clear zone, improve ditches: multiply by 1.3

<u>Highway Widening Subtotal</u>				\$12,415,291
----------------------------------	--	--	--	--------------

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
US 129 over Walnut Creek	200	24	4,800	\$60	\$288,000

### Signals

Emery Hwy, North Ave, 2nd St, SR 49, WalMart	5	\$100,000	\$500,000
master			\$20,000
fiberoptic interconnect cable			\$50,000
Subtotal			\$570,000

### ITS

Component	# Units	Unit Cost	Totals
CCTV at each intercha	4	\$ 10,000	\$ 40,000
Fiber Optic Cable Installed Urban	mi.	\$ 264,000 per mi.	\$ -
Subtotal			\$ 40,000

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial	1.3	40	274,560	6.30	\$275,000	\$1,733,333
Improvements Taken						\$900,000
Relocation						\$500,000
Damages						\$1,800,000
Subtotal						\$4,933,333
<u>Rural</u>						
Land	2.2	84	975,744	22.40	\$80,000	\$1,792,000
Improvements Taken						\$450,000
Relocation						\$150,000
Damages						\$400,000
Subtotal						\$2,792,000
<u>Net Cost</u>						\$7,725,333
<u>Scheduling Contingency</u>						\$4,248,933
<u>Admn/Court Cost</u>						\$7,184,560
<u>Inflation Factor</u>						<u>\$7,663,531</u>
<u>Right of Way Total</u>						<b>\$26,822,357</b>

**Summary**

Highway	\$12,415,291	
Bridges	\$288,000	
Signals	\$570,000	
ITS	<u>\$ 40,000</u>	
Construction Subtotal	\$13,313,291	
CEI	\$1,331,329	10% of construction subtotal
Construction Estimate	\$14,644,620	construction subtotal plus CEI
Preliminary Engineering	\$1,331,329	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$26,822,357	
Utility Relocation	\$1,996,994	15% of construction subtotal
Total	\$44,795,300	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

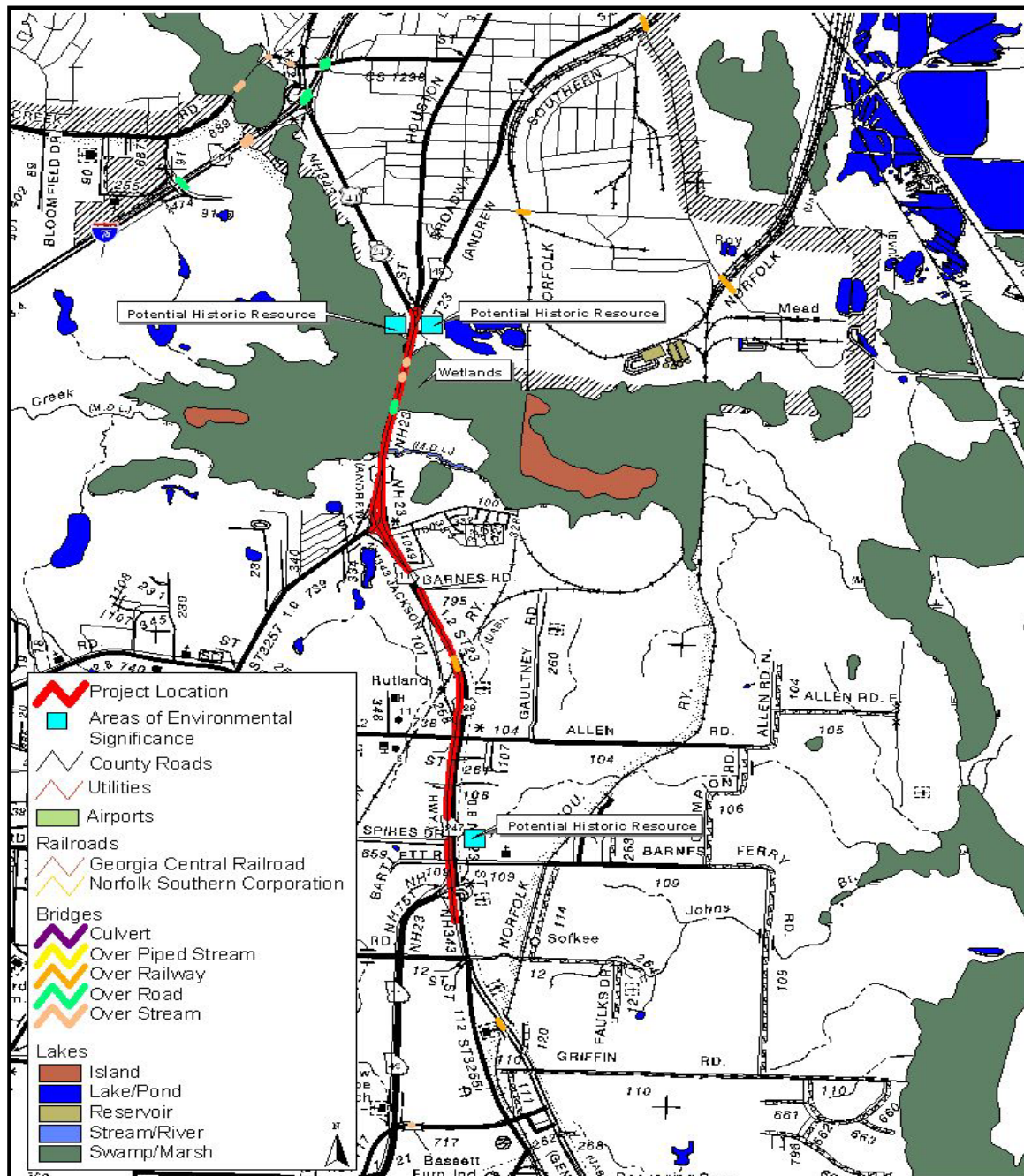
<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. Traffic congestion exists on this thoroughfare route within the Macon area. Freight flow is heavily impeded due to dense commercial and residential traffic. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as both an urban principal arterial and an urban minor arterial. The 3 year accident rate from 1995-1997 for the urban principal arterial portion is 133 as compared to the statewide average of 586. The accident rate for the section classified as an urban minor arterial is 992 as compared to the statewide average of 541. The current AADT is 25,200 and the current volume to capacity ratio ranges from .51 to .9 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 40,792 and a volume to capacity ratio ranging between .85 and 1.5 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS A and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS B without the project and a LOS A with the project in place. Implementation of this project will improve the LOS.				County		Bibb	
				Map Code		85	
				Route #		US 41	
				GDOT District		3	
				Cong. District		8	
				RDC		Middle Georgia	
				Length		3.2 miles	
				Mileposts			
				From: US 41 & SR 247 merger (north)		To: US 129	
Year	1998	2025	Access Control	From: None To: None	STRAHNET	Yes	
Traffic Vol.:	25,200	40,700	1995-1997 3 year Accident Rate	133 urban principal arterial and 992 urban minor arterial			
Truck %:	2%	2%	% Increase in Travel Speed	5%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen US 41 from six lanes to eight lanes including shoulder improvements. Reconstruct SR 247(US41) interchange with Houston Road to allow two lanes from Houston Road to go NB on US 41(SR 247) and to replace the left entrance with a right entrance ramp. Widen one lane to the outside in each direction – includes widening bridges over Rocky Creek, Tobesofkee Creek and wetlands.  The recommended system includes Closed Circuit Television (CCTV) monitoring with communication links to Macon/Bibb County/GDOT Transportation Control Center (TCC) to monitor traffic flow.  To reduce costs for this deployment, incremental costs could be shared with the ATMS Operations/Miscellaneous Improvements Project contained in the current Macon Area TIP. The ATMS Operations/Miscellaneous Improvements Project is currently funded at \$464,000 each year for FY 03 through FY 05 with the funding coming from Federal/State sources.							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$1,911,000
Right-of-Way	State/Federal	\$17,388,000
Utilities	Local	\$1,911,000
Construction	State/Federal	\$21,022,000
<b>Project Cost</b>		<b>\$42,232,000</b>

### Location and Environmental Resource Map





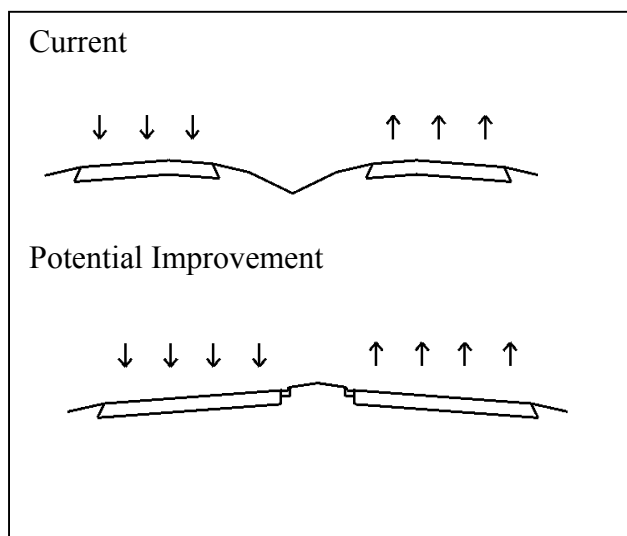
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



SR 247/ US 41 looking south near Broadway

Typical Section\*



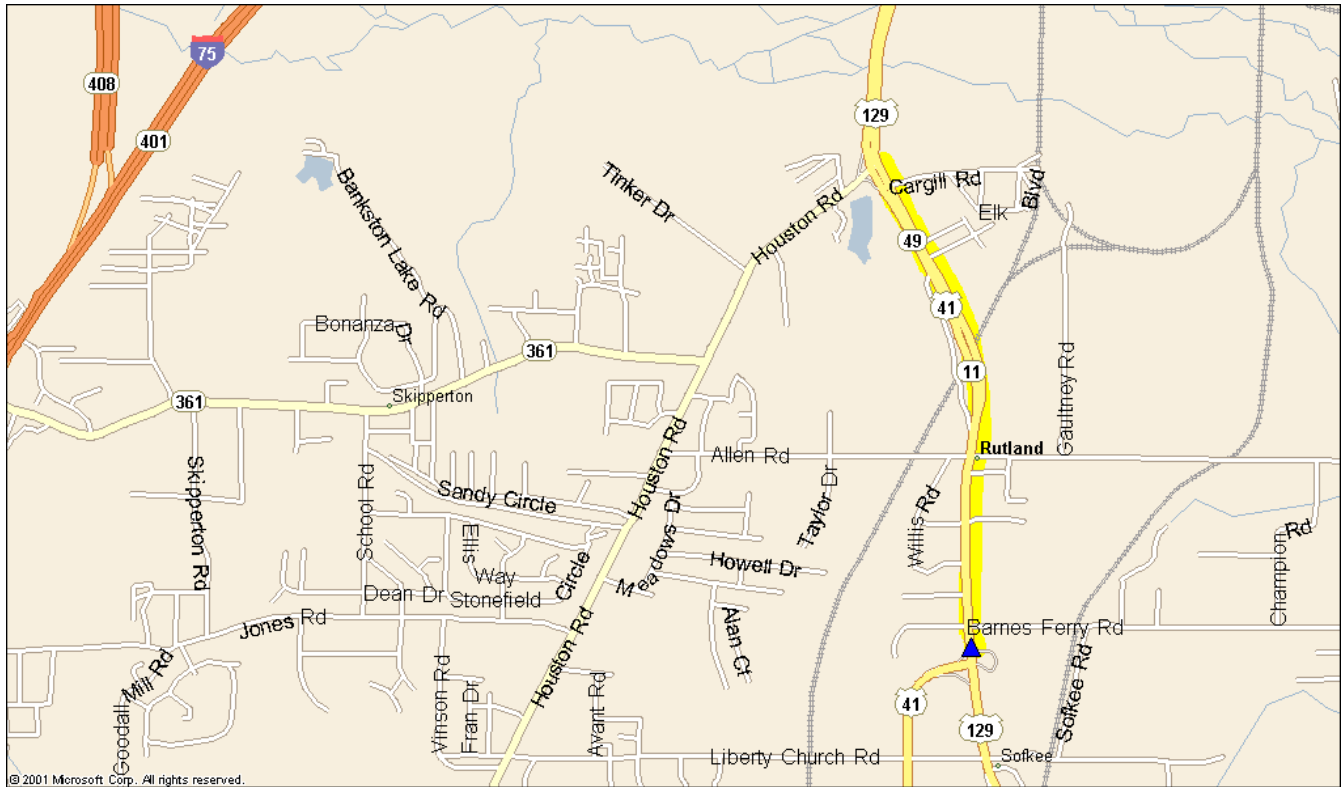
\*Typical Sections do not include acceleration, deceleration, or left turn lanes.





## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane rural	8 lane rural (ideally a freeway section)
Shoulder	2' outside paved, 2' inside paved	10' inside paved, 12' outside paved
Speed Design	55 mph	70 mph
Observed Safety Concerns	Left entrance from Houston Road to NB US41, curve at US 41/US 129 intersection, SB curve at Houston Rd. interchange	Replace left entr. ramp w/ right entr. ramp & SB curve @ Houston Rd will be modified w/ the interchange reconstruction.
Pavement	Adequate	Per GDOT Standard
Signals	US 41 at US 129	Add signals to Houston Road @ NB & SB ramps.
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV, fiber optic cable
Bridges	Seven bridges over Rocky Creek, Tobesofkee Creek and wetlands	Widen all bridges.
Other Major Structures	Also a bridge for SR 247 SB over Houston Road	Reconstruction will occur with the total interchange reconstruction portion of this project.
Access Control	A few driveways at north end	Complete access control is necessary
Erosion Control	Critical due to adjacent wetlands	
Staging	Staging construction of Houston Road interchange will require new bridge	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Three potential historic resources
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Tobesofkee and Rocky Creek and extensive wetlands
Wildlife Refuge	N/A
Endangered Species	Potential Bald eagle and Wood stork foraging habitat
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide or Individual Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	N/A

## Recommendation Description Initial Cost Estimate

<b>County</b>	Bibb
<b>Map Code</b>	85
<b>Route</b>	US 41
<b>Location Description</b>	US 41 between Houston Road and US 129 (common part of US 129 and US 41) - known locally as the Seven Bridges area
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/16/02

### Recommendation Description

Widen from 6 lane divided rural to 8 lane divided rural section, one lane to the outside in each direction. Reconstruct SR 247 (US 41) interchange with Houston Road to allow 2 lanes from Houston Road to go northbound on US 41 (SR 247) and to replace left entrance with a right entrance ramp.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1 - segment widening</u>	3.2		\$2,826,058	\$9,043,384
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,180,600	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	improve inadequate shoulders, provide adequate clear zone, improve ditches: multiply by 1.2			

### Segment 2 - reconstruct interchange

includes interchange structure costs

Source of Unit Cost	judgment	\$3,500,000	\$3,500,000
Year			
Adjustment to 2002			

<u>Subtotal</u>	\$12,543,384
-----------------	--------------

### Bridges

does not include interchange	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total	
7 bridges over Rocky Creek, Tobesofkee Creek & wetlands	7	200	68	95,200	\$60	\$5,712,000

### Signals

US 41 at US 129	1	\$100,000	\$100,000
Houston Road SB & NB ramps	2	\$100,000	\$200,000
master			\$20,000
fiberoptic interconnect cable			\$20,000
Subtotal			\$340,000

### ITS

Component	# Units	Unit Cost
CCTV at strategic loca	4	\$ 10,000
Fiber Optic Cable Inst	1.8 mi.	\$ 264,000 per mi.

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land						
segment widening & interchange reconstruction	3.2	84	1,419,264	32.58	\$100,000	\$3,258,182
Improvements Taken						\$450,000
Relocation						\$300,000
Damages						\$1,000,000
Subtotal						\$5,008,182
<u>Net Cost</u>						\$5,008,182
<u>Scheduling Contingency</u>						\$2,754,500
<u>Admn/Court Cost</u>						\$4,657,609
<u>Inflation Factor</u>						<u>\$4,968,116</u>
<u>Right of Way Total</u>						<b>\$17,388,407</b>

**Summary**

Highway	\$12,543,384	
Bridges	\$5,712,000	
Signals	\$340,000	
ITS	<u>\$ 515,200</u>	
Construction Subtotal	\$19,110,584	
CEI	\$1,911,058	10% of construction subtotal
Construction Estimate	\$21,021,643	construction subtotal plus CEI
Preliminary Engineering	\$1,911,058	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$17,388,407	
Utility Relocation	\$1,911,058	10% of construction subtotal
Total	\$42,232,167	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as an urban principal arterial. The 3 year accident rate from 1995-1997 for the segment is 61 as compared to the statewide average of 586 for urban principal arterials. The current AADT is 22,900 and the current volume to capacity ratio is .68. With no improvement, the corridor is anticipated to have an AADT of 38,383 and a volume to capacity ratio of 1.12 by 2025, indicating congestion along the corridor. Removing turning vehicles from travel lanes will improve the flow of traffic and reduce congestion.				County		Bibb	
				Map Code		436	
				Route #		US 23/US 129/North Ave	
				GDOT District		3	
				Cong. District		8	
				RDC		Middle Georgia	
				Length		0.08 mile	
				Mileposts			
From:I-16 EB exit ramp		To: US 23/Emery Hwy					
Year	1998	2025	Access Control	From: Partial To: Partial	STRAHNET	Yes	
Traffic Vol.:	22,900	38,400	1995-1997 3 year Accident Rate	61 urban principal arterial			
Truck %:	4%	4%	% Increase in Travel Speed	5%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	67% stays on current route.			
<b>PROJECT DESCRIPTION:</b>  Widen US 23/US 129/North Ave. from six lane divided to eight lane divided roadway. Relocate northbound bypass lane and access to loop ramp in NE quadrant.  Coordinate with I-16 improvement project, PI # 311000, 311005, 311400, and 311410. May involve replacement of I-16 bridge over North Ave (US 23/ US 129).							

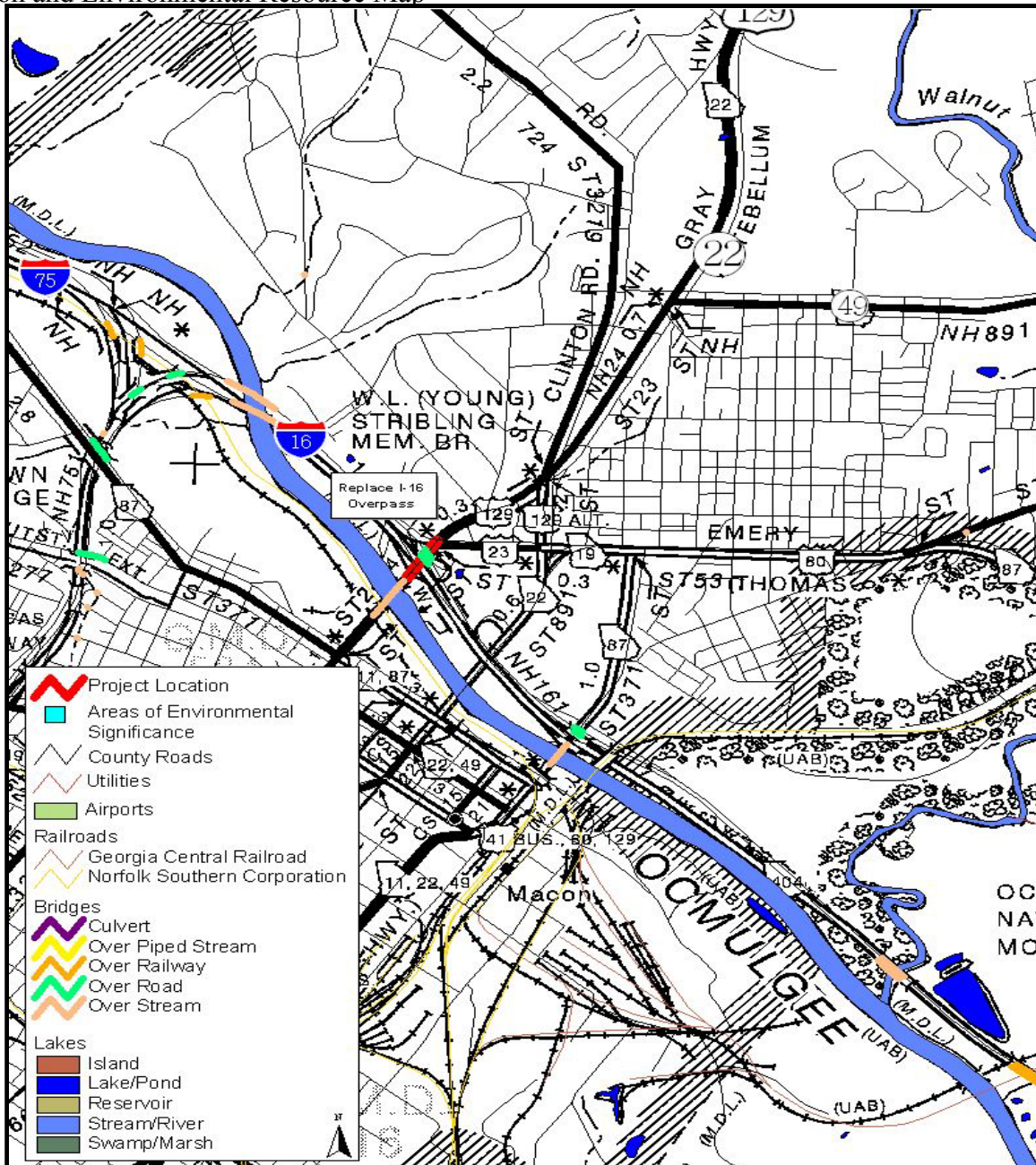




## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$302,000
Right-of-Way	State/Federal	\$1,591,000
Utilities	Local	\$108,000
Construction	State/Federal	\$2,376,000
<b>Project Cost</b>		<b>\$4,377,000</b>

Location and Environmental Resource Map





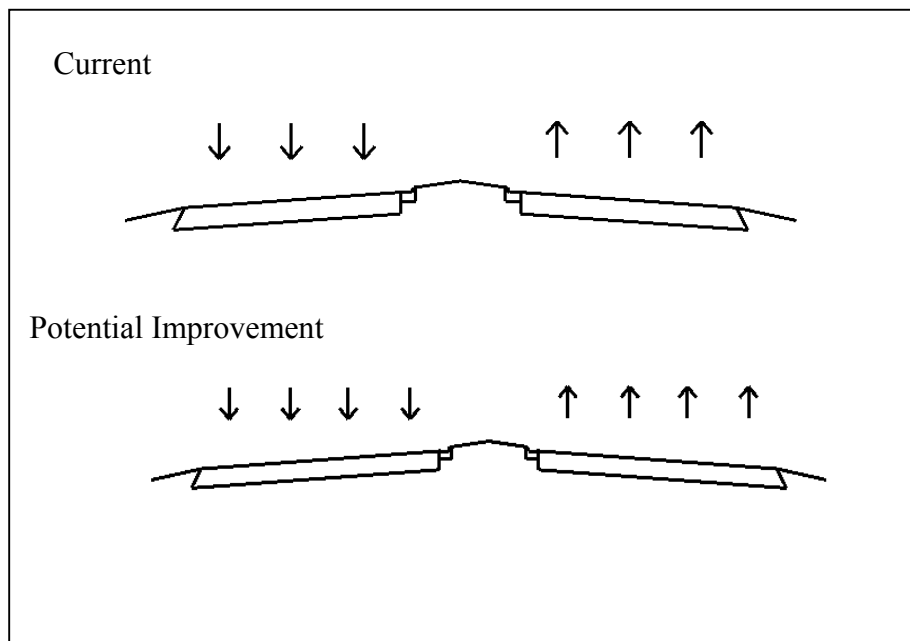
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



US 23/ US 129 looking north toward I-16

Typical Section\*



\* Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane divided urban	8 lane divided urban
Shoulder	Curb and gutter with sidewalks	Curb and gutter with sidewalks
Speed Design	45 mph	45 mph
Pavement	Per GDOT Standards	Per GDOT Standards
Signal	I-16 EB exit, I-16 WB entrance	Same
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Other Major Structures	I-16 over North Ave/US 23/US 129	Same (may need to be replaced in order to widen North Avenue/US 23/ US 129)
Access Control	Limit of access, no driveways	Retain Limit of Access, No driveways
Staging	Very difficult to stage this. Will probably require replacing I-16 bridges.	
Traffic Control	Upgrade 2 signals	



## Central Georgia HPC 6 Corridor Management Plan

### Environmental Issues (From field observations)

Issue	Comments / Observations
History	N/A
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Ocmulgee River on west side of I-16
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	No permits required as long as no construction takes place over or within river
404	N/A
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Bibb  
**Map Code** 436  
**Route** US 23/US 129/North Ave  
**Location Description** US 23 from I-16 EB Exit Ramp to US 23/Emery Hwy  
**Prepared By** David Low  
**Date Last Updated** 12/16/02

### Recommendation Description

Widen from 6 lane divided to 8 lane divided. Relocate NB bypass lane and access to loop ramp in NE quadrant.  
 Coordinate with I-16 improvement project. May involve replacement of I-16 bridge over North Ave (US 23/US 129).

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
	0.1		\$4,079,981	\$407,998
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,698,400	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	relocate NB bypass lane and access to loop ramp: multiply by factor of 1.4			

### Bridges

replace I-16 twin bridges over North Avenue	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total	
	2	200	63	25,200	\$60	\$1,512,000

### Signals

I-16 EB exit & WB entrance ramps	2			\$100,000	\$200,000
master					\$20,000
fiberoptic interconnect cable					\$20,000
Subtotal					\$240,000

ITS	Component	# Units	Unit Cost	Totals
-----	-----------	---------	-----------	--------

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial	0.1	40	21,120	0.48	\$275,000	\$133,333
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						\$100,000
Relocation						\$75,000
Damages						\$150,000
Subtotal						\$458,333
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$458,333
<u>Scheduling Contingency</u>						\$252,083
<u>Admn/Court Cost</u>						\$426,250
<u>Inflation Factor</u>						\$454,667
<u>Right of Way Total</u>						<b>\$1,591,333</b>

**Summary**

Highway	\$407,998	
Bridges	\$1,512,000	
Signals	\$240,000	
ITS		
Construction Subtotal	\$2,159,998	
CEI	\$216,000	10% of construction subtotal
Construction Estimate	\$2,375,998	construction subtotal plus CEI
Preliminary Engineering	\$302,400	14% of construction subtotal includes 1% concept, 1% environmental document, 12% design
Right of Way	\$1,591,333	
Utility Relocation	\$108,000	5% of construction subtotal
Total	\$4,377,731	





# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. Traffic congestion exists on this thoroughfare route within the Macon area. Freight flow is heavily impeded due to dense commercial and residential traffic. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as both a rural and urban principal arterial. The 3 year accident rate from 1995-1997 for the portion classified as rural principal arterial is 124 as compared to the statewide average of 143. The urban segment has an accident rate of 295 as compared to the statewide average of 586. The current AADT is 28,800 and the current volume to capacity ratio is .69. With no improvement, the corridor is anticipated to have an AADT of 46,015 and a volume to capacity ratio of 1.14 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS B with the project in place. In 2025 the corridor will operate at a LOS D without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Bibb	
				Map Code		519	
				Route #		US 129	
				GDOT District		3	
				Cong. District		8	
				RDC		Middle Georgia	
				Length		5.1 miles	
				Mileposts			
From: US 41		To: S. Bibb Co. line					
Year	1998	2025	Access Control	From: None To: None	STRAHNET	Yes	
Traffic Vol.:	28,800	46,000	1995-1997 3 year Accident Rate	124 rural principal arterial and 295 urban principal arterial.			
Truck %:	4%	4%	% Increase in Travel Speed	5%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen US 129 from four lane divided to six lane divided to include shoulder and ditch improvements. Because of high speeds and the need to separate opposing directions of traffic, widen to outside. Two existing substandard horizontal curves north of Echeconnee Creek will also require improvements.  The system includes Closed Circuit Television (CCTV) monitoring with communication links to Macon/Bibb County/GDOT Transportation Control Center (TCC) to monitor traffic flow.  To reduce costs for this ITS deployment, incremental costs could be shared with the ATMS Operations/Miscellaneous Improvements Project contained in the current Macon Area TIP. The ATMS Operations/Miscellaneous Improvements Project is currently funded at \$464,000 each year for FY 03 through FY 05 with the funding coming from Federal/State sources.  Access management is recommended within the limits of this work.							



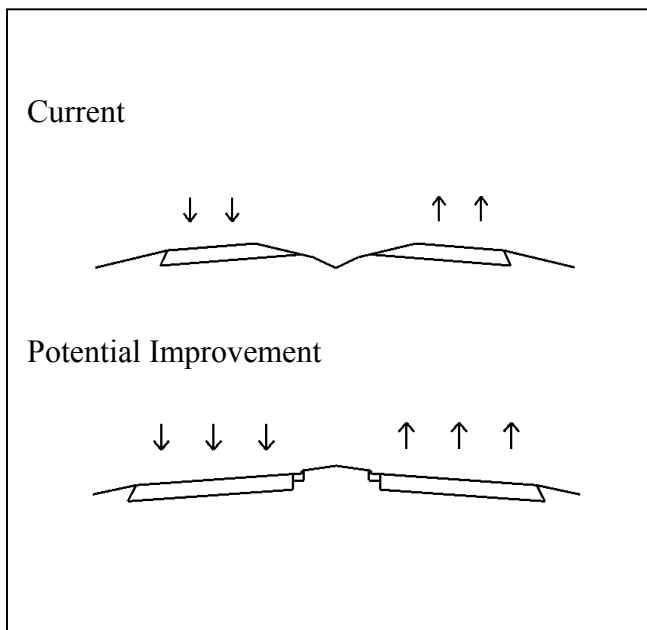


Photo of location



US 129 looking south near Macon Airport

Typical Section\*

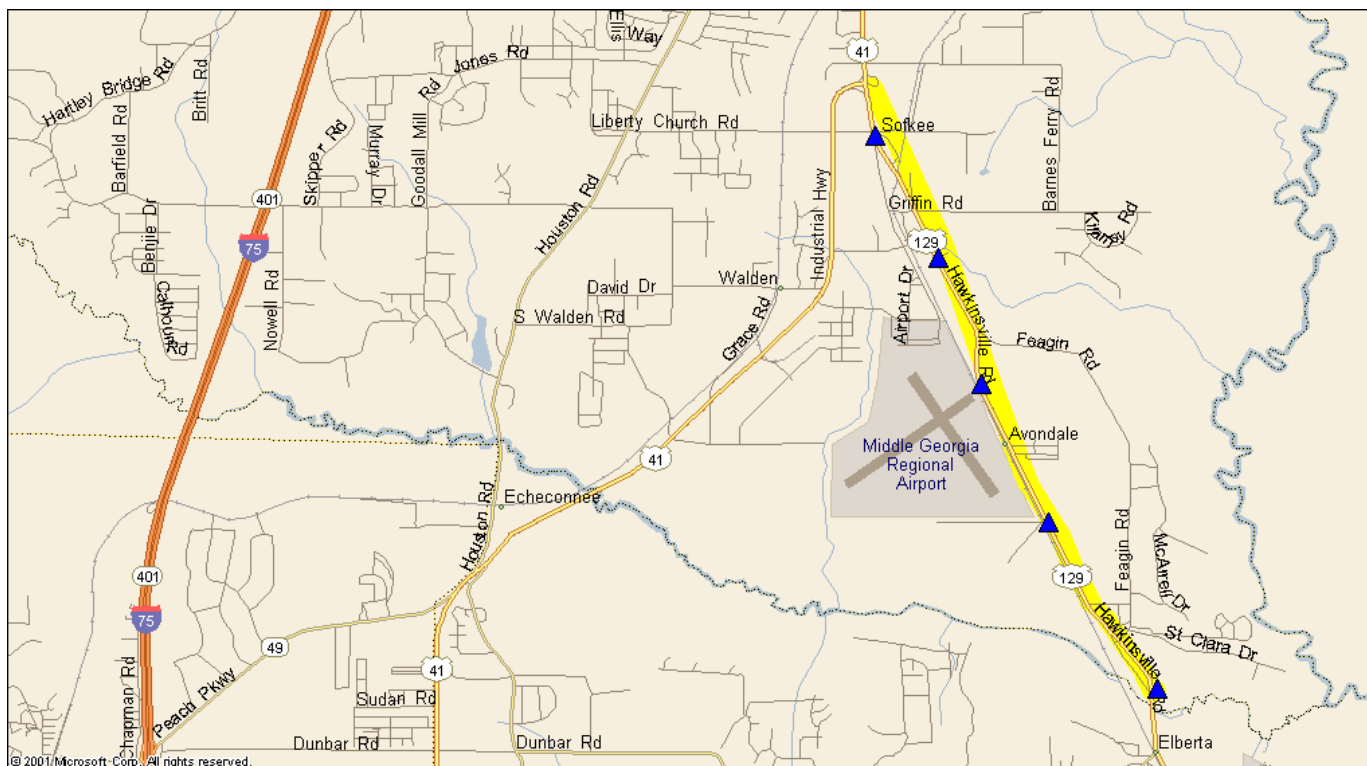


\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane divided rural	6 lane divided rural
Shoulder	None paved	12' paved outside, 4' paved inside
Speed Design	55 mph speed limit	65 mph
Observed Substandard Design Features	Two sharp horizontal curves north of Echeconnee Creek	Flatten horizontal curves
Drainage	Underdeveloped ditches	Improved ditches
Pavement	Asphalt, good condition	Per GDOT Standards
Signals	Avondale Mill Road	Airport access, Avondale Mill Road
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV, fiber optic cable
Bridges	Over RR spur track, over creek just north of Echeconnee Creek, over Echeconnee Creek	All bridges will require widening for additional lanes, however, the North bridge will also need shoulders
Access Control	None	Needs access management study and reorganization
Railroads	Bridge over RR, RR parallels US129 on West side from airport to South of the county line	
Erosion Control	Critical near creek at south end	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One potential district and numerous potential individual resources
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	Two cemeteries and one airport
Parks and Recreation	N/A
Wetlands and Streams	Echeconnee Creek and wetlands associated with creek at County line
Wildlife Refuge	N/A
Endangered Species	Potential foraging habitat for Wood Stork and Bald Eagle
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes



## Recommendation Description Initial Cost Estimate

<b>County</b>	Bibb
<b>Map Code</b>	519
<b>Route</b>	US 129
<b>Location Description</b>	US 129 from S Bibb Co line to US 41
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/16/02

### Recommendation Description

Widen from 4 lane divided to 6 lane divided. Because of high speeds and need to separate opposing directions of traffic, widen to outside.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
	5.1		\$2,914,272	\$14,862,787
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,698,400	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
over RR spur track	200	32	6,400	\$60	\$384,000
over creek just N of Echeconnee Creek	400	32	12,800	\$60	\$768,000
over Echeconnee Creek	800	32	25,600	\$60	<u>\$1,536,000</u>
Subtotal					\$2,688,000

### Signals

Avondale Mill Road	1		\$100,000	\$100,000
CR 265/Airport Access Rd	1		\$100,000	<u>\$100,000</u>
			Total	\$200,000

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic loc	5	\$ 10,000	\$ 50,000
Fiber Optic Cable Ins	4.9 mi.	\$ 264,000 per mi.	<u>\$ 1,293,600</u>
			\$ 1,343,600

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	5.1	40	1,077,120	24.73	\$80,000	\$1,978,182
Improvements Taken						\$450,000
Relocation						\$250,000
Damages						\$600,000
Subtotal						\$3,278,182
<u>Net Cost</u>						\$3,278,182
<u>Scheduling Contingency</u>						\$1,803,000
<u>Admn/Court Cost</u>						\$3,048,709
<u>Inflation Factor</u>						<u>\$3,251,956</u>
<u>Right of Way Total</u>						<b>\$11,381,847</b>

**Summary**

Highway	\$14,862,787	
Bridges	\$2,688,000	
Signals	\$200,000	
ITS	<u>\$ 1,343,600</u>	
Construction Subtotal	\$19,094,387	
CEI	\$1,909,439	10% of construction subtotal
Construction Estimate	\$21,003,826	construction subtotal plus CEI
Preliminary Engineering	\$1,909,439	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$11,381,847	
Utility Relocation	\$1,527,551	8% of construction subtotal
Total	\$35,822,663	



# Central Georgia HPC 6 Corridor Management Plan

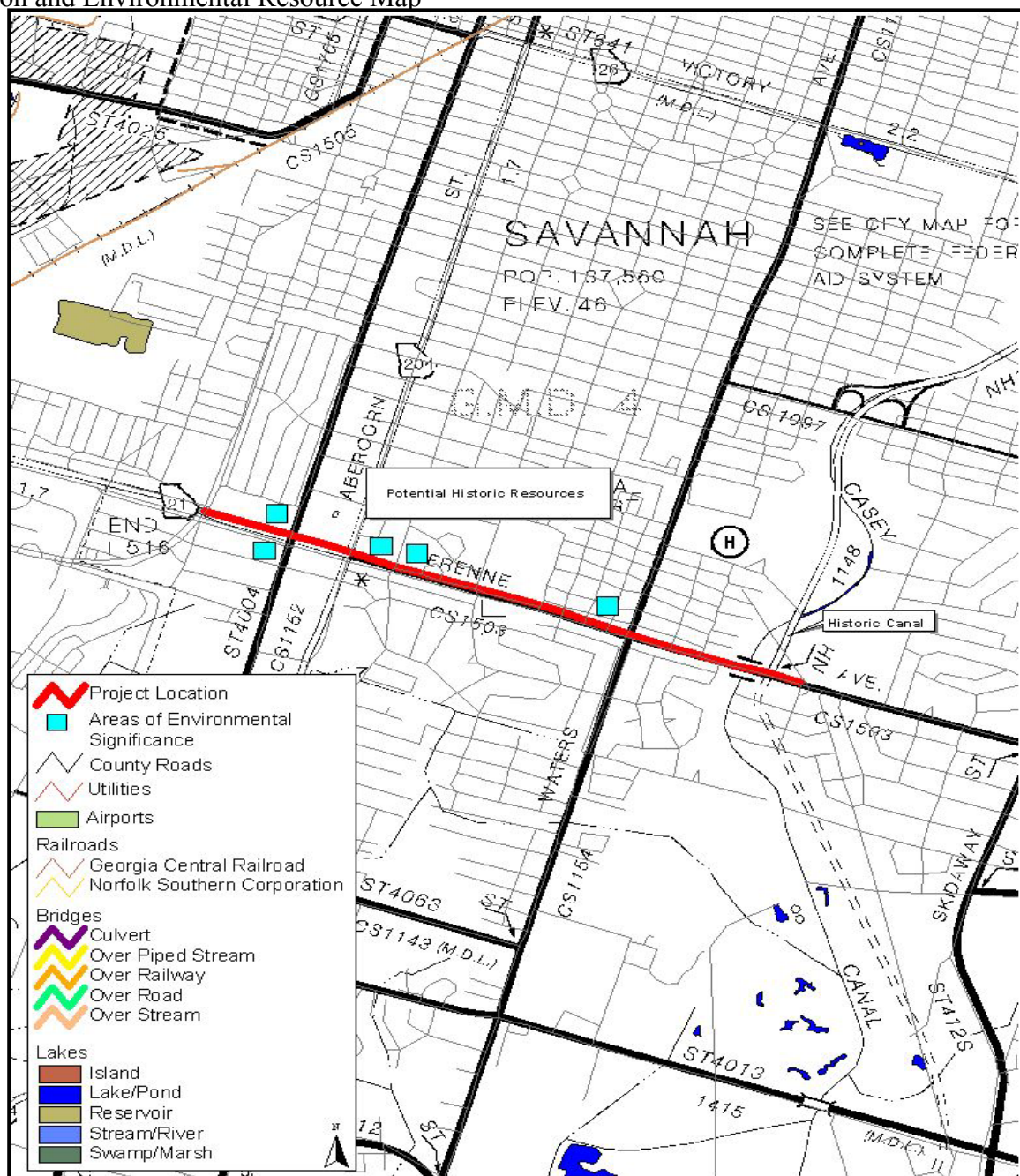
## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as an urban principal arterial. The 3 year accident rate from 1995-1997 for this segment is 232 as compared to the statewide average of 586 for urban principal arterials. The current AADT is 40,100 and the current volume to capacity ratio is 1.24-1.78. With no improvement, the corridor is anticipated to have an AADT of 63,991 and a volume to capacity ratio of 2.05-2.95 by 2025, indicating congestion along the corridor. HNTB conducted a corridor study in 2001 that showed this corridor operating at a LOS E in 1995. In 2020 the corridor will operate at a LOS F without the project and at a LOS B with the project in place. Implementation of this project will improve the LOS.				County		Chatham	
				Map Code		104	
				Route #		SR 21 (Derenne Avenue)	
				GDOT District		5	
				Cong. District		1	
				RDC		Coastal Georgia	
				Length		2.8 miles	
				Mileposts			
From: I-516		To: Truman Pkwy					
Year	1998	2025	Access Control	From: None To: controlled	STRAHNET	Yes	
Traffic Vol.:	40,100	63,991	1995-1997 3 year Accident Rate	232 urban principal arterial			
Truck %:	1%	1%	% Increase in Travel Speed	100%	% Increase in Capacity	190%	
No. of Lanes	4	8	% Shift in Non-Freight	50%			
<b>PROJECT DESCRIPTION:</b>  Reconstruct SR 21 (Derenne Avenue) as a four lane freeway with two-lane one-way frontage roads on each side from I-516 end to Truman Parkway. HNTB shows good concept and typical sections in their draft East-West Corridor Study <i>Option 1 Major Investment Study</i> , October 2001, prepared for Chatham County- Savannah Metropolitan Planning Commission.  Hold existing right of way on the north side of the road and widen to the south side. Noise walls should be included.  The system includes closed circuit Television (CCTV) monitoring with communication links to the Savannah/Chatham County/GDOT Regional Transportation Control center. The TCC is scheduled for construction in fiscal year 2005.  Incremental costs for the ITS component of this project to be shared with existing plans for Savannah Signal System and Communications upgrade as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019" Years 1 -5 (p 29).  Other possible funding vehicles would be to share incremental costs with projects contained in the current Chatham County TIP. The ITS solutions recommended above could be a subset of the Savannah/Chatham County/GDOT Regional Transportation Control center. The cost of constructing the TCC is \$1 million with funding from Federal/State sources and is scheduled for Construction in FY 2005. (See Savannah TIP page 11).							



Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$9,303,000
Right-of-Way	State/Federal	\$72,975,000
Utilities	Local	\$5,472,000
Construction	State/Federal	\$60,195,000
<b>Project Cost</b>		<b>\$147,945,000</b>

## Location and Environmental Resource Map





## Central Georgia HPC 6 Corridor Management Plan

Photo of location



**Derenne Avenue looking east from intersection with Abercorn Street**



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



**Note for Map Code 104:** Currently there are CCTV cameras in place along DeRenne Avenue at the intersections with White Bluff Rd., Abercorn St., and Harry S. Truman Pkwy. The proposed CCTV camera at the Waters Ave. intersection will supplement the cameras already in place. It is also recommended that the CCTV camera at the intersection with Harry S. Truman Pkwy be repositioned as the newly constructed overpass blocks the camera's view as it looks eastward down DeRenne Ave.

#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed





## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	Four lane divided urban	Four lane freeway with two two-lane frontage roads
Shoulder	Curb and gutter	See HNTB typicals
Pavement	Adequate	Per GDOT Standards
Signals	Truman Pkwy NB & SB Ramps, Waters Ave, Paulsen St, Reynolds St, Habersham St, Abercorn, Bull, Montgomery	None
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV
Bridges		Freeway over Mildred St, Montgomery, Bull, Abercorn, Waters (Casey Canal may also require widening)
Access Control	None	Controlled access freeway w/ partial control access frontage roads



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Five potential historic resources and one historic canal (Casey Canal)
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Casey Canal
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Chatham  
**Map Code** 104  
**Route** SR 21  
**Location Description** Derenne Avenue (SR 21) from I-516 to Truman Pkwy  
**Prepared By** David Low  
**Date Last Updated** 11/12/02

### Recommendation Description

4 lane freeway with two-lane one-way frontage roads on each side from I-516 end to Truman Parkway.  
 Noise walls included.  
 Hold existing right-of-way on the north side and widen to the south side.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Freeway</u>	2.8		\$6,154,056	\$17,231,357
Source of Unit Cost	FDOT 2000 Transportation Costs		\$3,798,800	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	noise walls and staging construction under traffic: multiply by factor of 1.5			
<u>Two two-lane frontage roads</u>	2	2.8	\$3,499,751	\$19,598,604
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,492,700	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	staging construction under traffic: multiply by factor of 1.3			
<u>Subtotal</u>				\$36,829,961

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Freeway over:					
Mildred Street	2	200	45	18,000	\$60
Montgomery Street	2	400	45	36,000	\$60
Bull Street	2	400	45	36,000	\$60
Abercorn Street	2	400	45	36,000	\$60
Waters Avenue	2	400	45	36,000	\$60
Subtotal					<u>\$2,160,000</u>
					\$9,720,000

### Reinforced Earth Walls

	Quantity	Length (ft)	Height (ft)	Area (sq ft)	Unit Cost	Total
Mildred Street	4	400	24	19,200	\$60	\$1,152,000
Montgomery Street	4	400	24	19,200	\$60	\$1,152,000
Bull Street	4	400	24	19,200	\$60	\$1,152,000
Abercorn Street	4	400	24	19,200	\$60	\$1,152,000
Waters Avenue	4	400	24	19,200	\$60	<u>\$1,152,000</u>
Subtotal						\$5,760,000

### Signals

Truman Pkwy NB ramps	1				\$100,000	\$100,000
Truman Pkwy SB ramps	1				\$100,000	\$100,000
Waters Avenue	2				\$100,000	\$200,000
Paulsen Street	2				\$100,000	\$200,000
Reynolds Street	2				\$100,000	\$200,000
Habersham Street	2				\$100,000	\$200,000
Abercorn Street	2				\$100,000	\$200,000
Bull Street	2				\$100,000	\$200,000
Montgomery Street	2				\$100,000	\$200,000
Mildred Street	2				\$100,000	\$200,000
master						\$20,000
fiber optic interconnect cable						\$150,000
Subtotal						\$1,970,000

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic loca	2	\$ 10,000	\$ 20,000
Fiber Optic Cable Inst	1.6 mi.	\$ 264,000 per mi.	\$ 422,400
			<u>\$ 442,400</u>

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial	1.8	120	1,140,480	26.18	\$275,000	\$7,200,000
residential	1.0	120	633,600	14.55	\$125,000	<u>\$1,818,182</u>
land subtotal						\$9,018,182
Improvements Taken						\$8,000,000
Relocation						\$1,500,000
Damages						\$2,500,000
Subtotal						\$21,018,182
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$21,018,182
<u>Scheduling Contingency</u>						\$11,560,000
<u>Admn/Court Cost</u>						\$19,546,909
<u>Inflation Factor</u>						<u>\$20,850,036</u>
<u>Right of Way Total</u>						<b>\$72,975,127</b>

**Summary**

Highway	\$36,829,961	
Bridges	\$9,720,000	
Walls	\$5,760,000	
Signals	\$1,970,000	
ITS	<u>\$ 442,400</u>	
Construction Subtotal	\$54,722,361	
CEI	\$5,472,236	10% of construction subtotal
Construction Estimate	\$60,194,597	construction subtotal plus CEI
Preliminary Engineering	\$9,302,801	17% of construction subtotal includes 1% concept, 1% environmental document, 15% design
Right of Way	\$72,975,127	
Utility Relocation	\$5,472,236	10% of construction subtotal
Total Cost	\$147,944,762	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. This corridor is one of the main routes to the Port of Savannah. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as an urban principal arterial. The 3 year accident rate from 1995-1997 for the segment is 183 as compared to the statewide average of 586 for urban principal arterials. The current AADT is 42,300 and is anticipated to have an AADT of 68,908 by 2025, indicating congestion along the corridor. Additional capacity is necessary to accommodate future growth in traffic. Reduced congestion will create a safer environment for freight movement through the corridor. In 1998 the corridor operated at a LOS C and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS F without the project and a LOS D with the project in place.				County		Chatham	
				Map Code		117	
				Route #		SR 25	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		0.8 mile	
				Mileposts			
From: SR 26C		To: SR 21 Spur					
Year	1998	2025	Access Control	From: None To: None	STRAHNET	Yes	
Traffic Vol.:	42,300	68,900	1995-1997 3 year Accident Rate	183 urban principal arterial			
Truck %:	2%	2%	% Increase in Travel Speed	0%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen SR 25 from four lanes with a center turn lane to six lane divided urban section.							







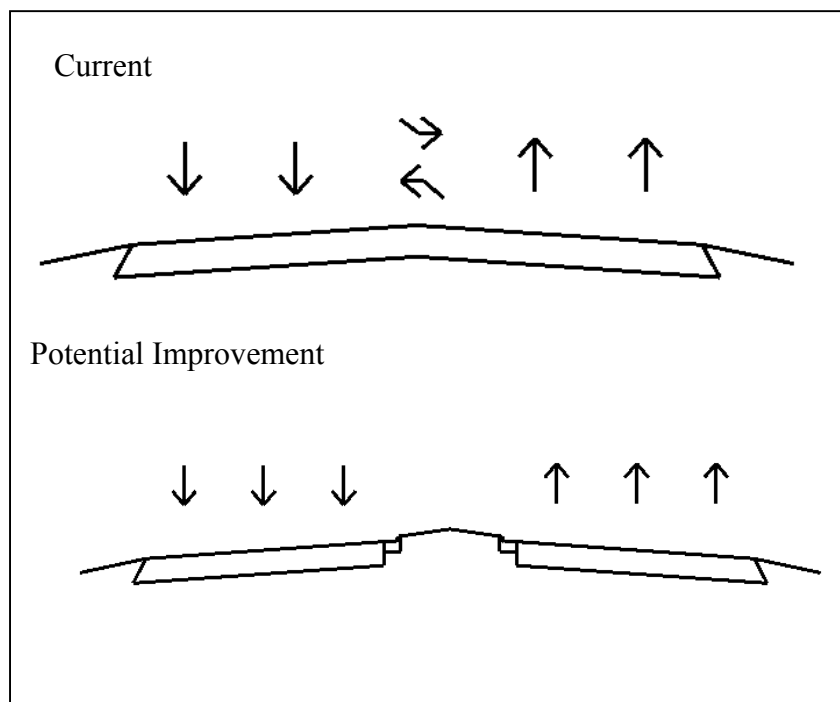
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



Looking northwest on SR 25 toward intersection with SR 21 Spur (Brampton Road)

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane urban w/ center turn lane and no C&G on NE side	6 lane divided urban section
Shoulder	10' grass shoulder on NE side, C&G on SW side	None
Speed Design	45 mph	45 mph
Pavement	Asphalt	Same
Signals	SR 21 Spur, SR 26 Conn	Same
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	None	None
Railroads	RR parallels NE side	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One railroad, one potential historic resource
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	One wetland
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Chatham
<b>Map Code</b>	117
<b>Route</b>	SR 25
<b>Location Description</b>	SR 25 from SR 26C to SR 21 Spur
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	11/12/02

### Recommendation Description

Widen from 4 lanes w/ center turn lane to a 6 lane divided urban section

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1</u>	0.8		\$2,774,520	\$2,219,616
Source of Unit Cost		FDOT 2000 Transportation Costs	\$2,569,000	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
none			0	\$60	\$0

### Signals

SR 21 Spur, SR 26 Conn	2			\$100,000	\$200,000
------------------------	---	--	--	-----------	-----------

### ITS

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial	0.8	30	126,720	2.91	\$250,000	\$727,273
residential					\$55,000	
Improvements Taken						\$400,000
Relocation						\$100,000
Damages						\$500,000
Subtotal						\$1,727,273
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$1,727,273
<u>Scheduling Contingency</u>						\$950,000
<u>Admn/Court Cost</u>						\$1,606,364
<u>Inflation Factor</u>						\$1,713,455
<u>Right of Way Total</u>						\$5,997,091

**Summary**

Highway	\$2,219,616	
Bridges	\$0	
Signals	\$200,000	
ITS	0	
Construction Subtotal	\$2,419,616	
CEI	\$241,962	10% of construction subtotal
Construction Estimate	\$2,661,578	construction subtotal plus CEI
Preliminary Engineering	\$241,962	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$5,997,091	
Utility Relocation	\$241,962	10% of construction subtotal
Total Cost	\$9,142,592	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This segment of roadway is classified as an urban principal arterial. The 3 year accident rate from 1995-1997 is 261 as compared to the statewide average of 586 for urban principal arterials. The current AADT is 21,300 and the current volume to capacity ratio ranges between .60 and 1.47 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 34,046 and a volume to capacity ratio ranging from 1.00 to 2.45 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at LOS B and would have operated at a LOS A with the project in place. In 2025 the corridor will operate at a LOS C without the project and a LOS of B with the project in place. Implementation of this project will improve the LOS.				County		Houston	
				Map Code		149	
				Route #		US 129	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Georgia	
				Length		5.1 miles	
				Mileposts			
From: SR 247C		To: SR 96					
Year	1998	2025	Access Control	From: None To: None	STRAHNET	Yes	
Traffic Vol.:	21,300	34,000	1995-1997 3 year Accident Rate	261 urban principal arterial			
Truck %:	4%	4%	% Increase in Travel Speed	0%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen US 129 from four lane w/ center turn lane rural with wide paved shoulders to six lane divided with paved shoulders from SR 247C to Russell Parkway. Widen four lane rural to six lane divided rural from Russell Parkway to Sandy Run Creek. Widen from four lane w/ center turn lane rural to six lane divided rural from Sandy Run Creek to SR 96.							





Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	Local	\$1,524,000
Right-of-Way	State/Federal	\$23,326,000
Utilities	Local	\$1,524,000
Construction	State/Federal	\$16,766,000
<b>Project Cost</b>		<b>\$43,140,000</b>

## Location and Environmental Resource Map

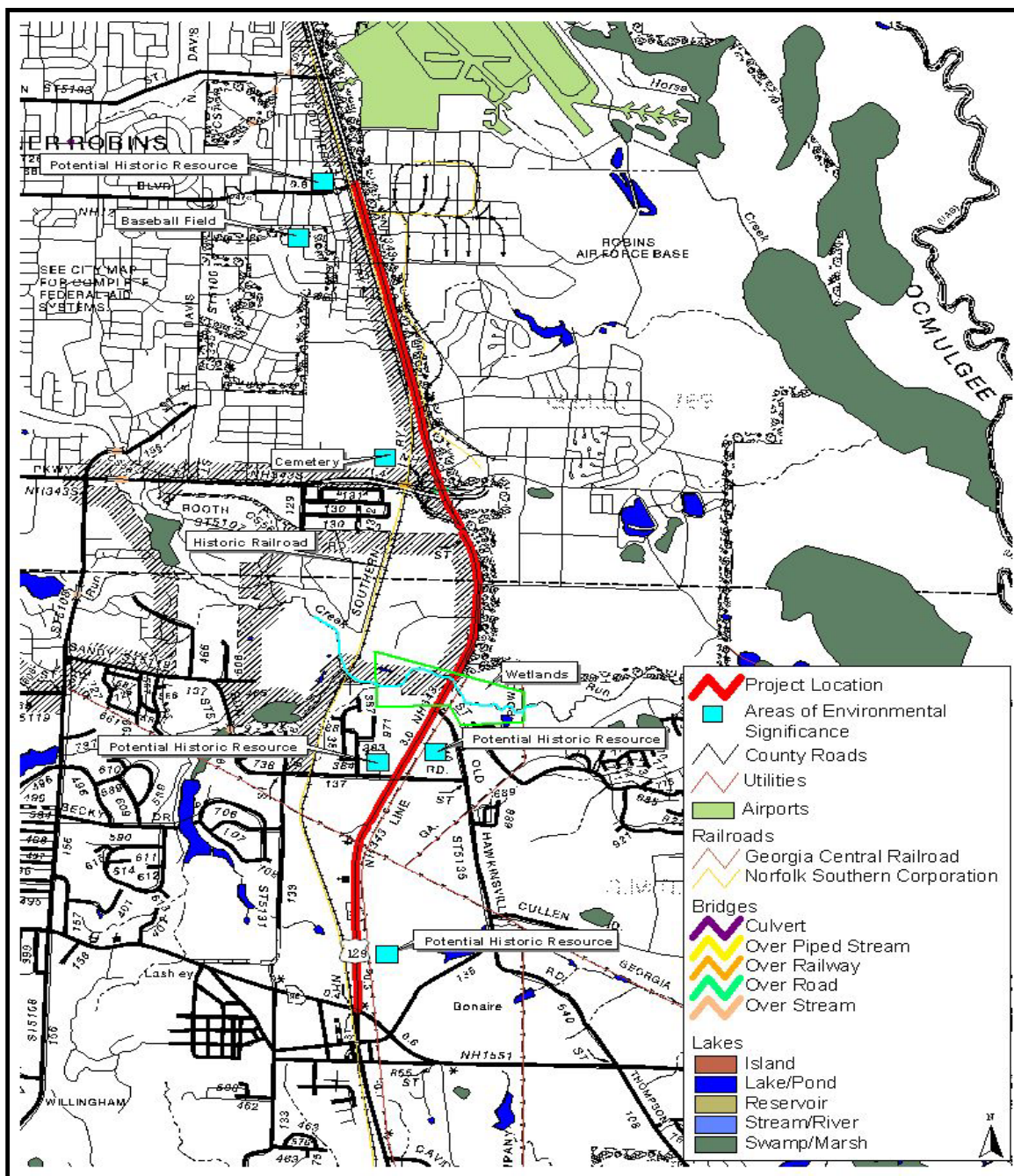


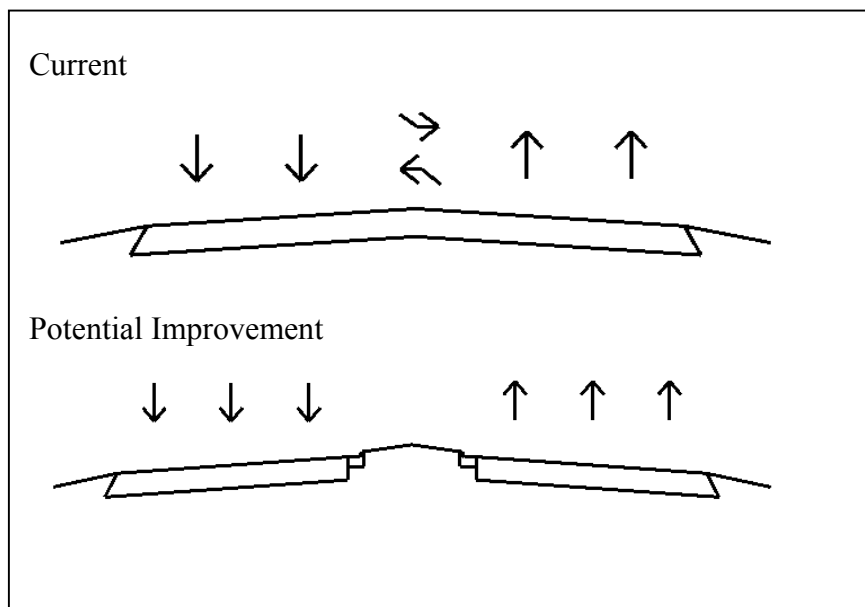


Photo of location



US 129 Looking north from Sandy Run Road

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



# Central Georgia HPC 6 Corridor Management Plan

## Design and Construction Issues (From field observations)

Issue	Existing			Proposed
	North	Middle	South	
Typical Section	4 lane (w/ center turn lane) rural w/ shoulder	4 lane rural	4 lane (w/ center turn lane) rural	6 lane divided rural
Shoulder	12' paved outside	4' paved outside	4' paved outside	2' inside paved, 4' outside paved
Speed Design	45 mph	55 mph	45mph	45 mph
Observed Substandard Design Features	No center turn lane from Russell parkway to Sandy Run Creek			
Drainage	Ditches			Ditches
Pavement	Adequate			Per GDOT Standards
Signals	SR 96, SR 247C, RAFB Gate 5/MLK			Same
Signing and Marking	Per GDOT Standards			Per GDOT Standards
ITS Opportunities	None			None
Bridges	Russell Pkwy over US 129, US 129 over Sandy Run Creek			
Railroads	RR adjacent to US 129 on the west side from SR 247C to Russell Pkwy			



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Numerous potential historic resources, one railroad
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	One cemetery north of Russel Pkwy, Robbins Air Force Base
Parks and Recreation	One baseball field South of MLK
Wetlands and Streams	Sandy Run Creek and wetlands associated with creek
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Houston  
**Map Code** 149  
**Route** US 129  
**Location Description** US 129 from SR 247C to SR 96  
**Prepared By** David Low  
**Date Last Updated** 12/15/02

### Recommendation Description

Widen from five lane rural with wide paved shoulders to 6 lane divided with paved shoulders from SR 247C to Russell Parkway. Widen from 4 lane rural to 6 lane divided rural from Russell Parkway to Sandy Run Creek. Widen from 5 lane rural to 6 lane divided rural from Sandy Run Creek to SR 96.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1 - northern section</u>				
rural section: SR 247C (Watson Blvd) to Russell Pa	1.9		\$2,774,520	\$5,271,588
Source of Unit Cost			FDOT 2000 Transportation Costs	
Year			2000	
Adjustment to 2002			4% per year is growth factor of 1.08	
<u>Segment 2 - middle section</u>				
rural section: Russell Parkway to Sandy Run Creek	1.1		\$2,774,520	\$3,051,972
Source of Unit Cost			FDOT 2000 Transportation Costs	
Year			2000	
Adjustment to 2002			4% per year is growth factor of 1.08	
<u>Segment 3 - southern section</u>				
rural section: Sandy Run Creek to SR 96	2.1		\$2,774,520	\$5,826,492
Source of Unit Cost			FDOT 2000 Transportation Costs	
Year			2000	
Adjustment to 2002			4% per year is growth factor of 1.08	
<u>Highway Widening Subtotal</u>				\$14,150,052

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
US 129 over Sandy Run Creek	300	44	13,200	\$60	\$792,000

### Signals

SR 247C, RAFB Gate 5/MLK, SR 96	3	\$100,000	\$300,000
---------------------------------	---	-----------	-----------

ITS	Component	# Units	Unit Cost	Totals
-----	-----------	---------	-----------	--------

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial	1.9	26	260,832	5.99	\$275,000	\$1,646,667
commercial	1.1	44	255,552	5.87	\$200,000	\$1,173,333
residential	1.9	30	300,960	6.91	\$80,000	\$552,727
commercial	0.2	30	31,680	0.73	\$200,000	<u>\$145,455</u>
Land Subtotal						\$3,518,182
Improvements Taken						\$900,000
Relocation						\$500,000
Damages						\$1,800,000
Subtotal						\$6,718,182
<u>Rural</u>						
Land			0	0.00		\$0
Improvements Taken						\$0
Relocation						\$0
Damages						\$0
Subtotal						\$0
<u>Net Cost</u>						\$6,718,182
<u>Scheduling Contingency</u>						\$3,695,000
<u>Admn/Court Cost</u>						\$6,247,909
<u>Inflation Factor</u>						<u>\$6,664,436</u>
<u>Right of Way Total</u>						<b>\$23,325,527</b>

**Summary**

Highway	\$14,150,052	
Bridges	\$792,000	
Signals	\$300,000	
ITS		
Construction Subtotal	\$15,242,052	
CEI	\$1,524,205	10% of construction subtotal
Construction Estimate	\$16,766,257	construction subtotal plus CEI
Preliminary Engineering	\$1,524,205	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$23,325,527	
Utility Relocation	\$1,524,205	10% of construction subtotal
Total	\$43,140,195	





# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

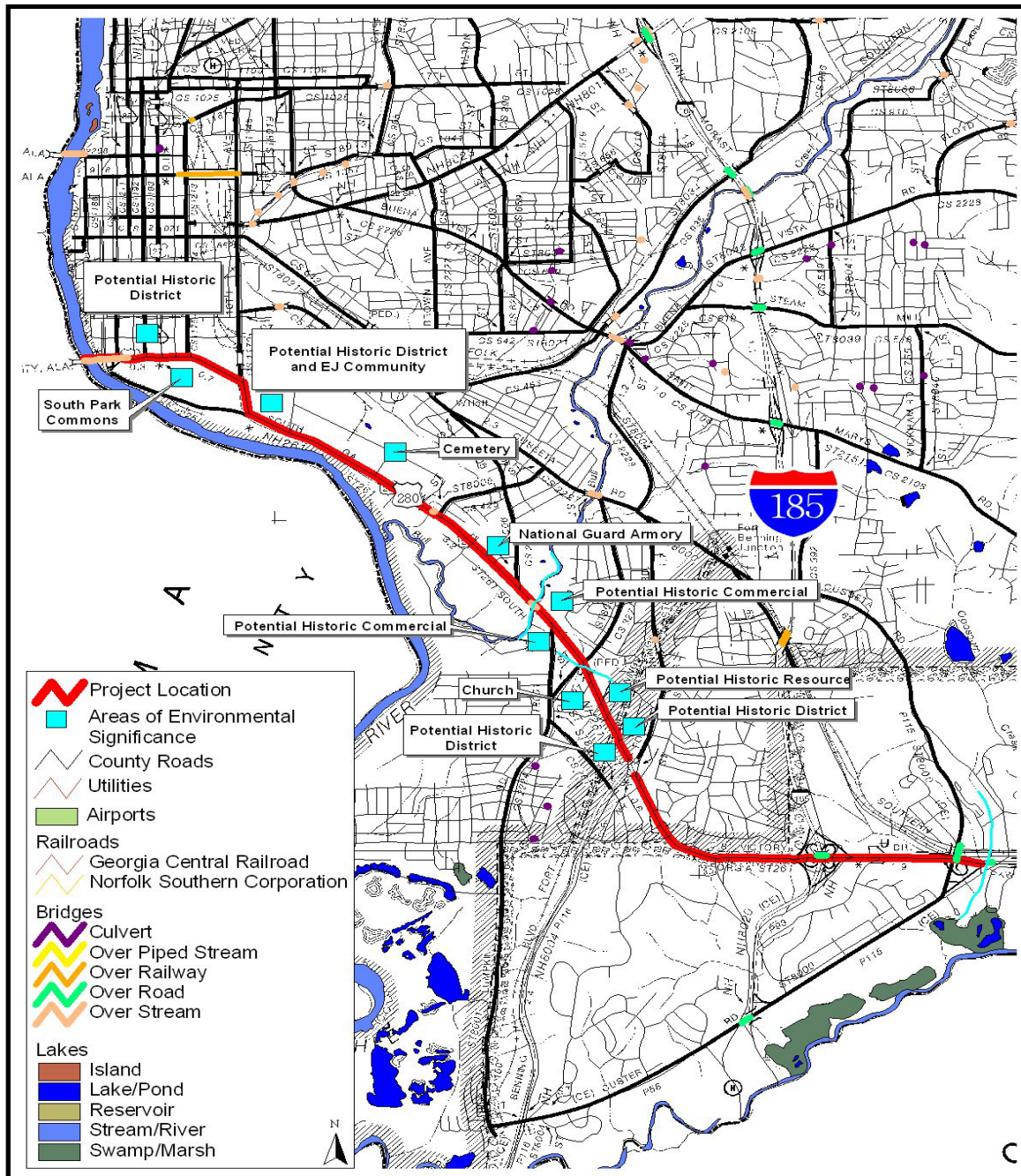
<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. The accident data is unavailable for this roadway segment. The current AADT is 40,000 and the current volume to capacity ratio ranges between .48 and .81 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 64,667 and a volume to capacity ratio ranging from .79 to 1.35 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS B with the project in place. In 2025 the corridor will operate at a LOS D without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Muscogee
				Map Code		178
				Route #		US 27
				GDOT District		3
				Cong. District		2
				RDC		Lower Chattahoochee
				Length		6.4 miles
				Mileposts		
From: Alabama St. line		To: 1.5 miles East of I-185				
Year	1998	2025	Access Control	From: partial To: controlled	STRAHNET	Yes
Traffic Vol.:	40,000	64,700	1995-1997 3 year Accident Rate	Data Unavailable		
Truck %:	4%	4%	% Increase in Travel Speed	100%	% Increase in Capacity	72%
No. of Lanes	6	8	% Shift in Non-Freight	50%		
<b>PROJECT DESCRIPTION:</b>  Convert six lane arterial to a four lane freeway with two two-lane frontage roads on each side. Noise walls included.  The system includes closed circuit Television (CCTV) monitoring, communication links to proposed Columbus Regional Transportation Control Center (TCC), highway advisory radio (HAR) and dynamic message signs (DMS). The system will be linked to the Columbus TCC to monitor traffic flow and provide traveler information to both automobile and truck traffic on major routes entering city. This advance information can facilitate the re-routing of traffic thereby reducing congestion on US 280. The Columbus TCC is scheduled for construction in FY03.  Incremental costs for this project can be shared with existing plans for Columbus Signal System and Communications upgrade and Changeable Message Sign deployment plans as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019." Other possible funding vehicles would be to share incremental costs with projects in the current Columbus-Phenix City TIP. The ITS Technologies contained in this project description could be a subset of these TIP projects. The projects are 1) the future ATMS/GDOT Regional TCC (ITS Center for TCC) in Columbus; and 2) The ITS components of the TCC. Funding for construction of the TCC in FY03 is \$1,100,000 from Federal and State sources. Funding for the ATMS components in FY03 is \$1,997,000 (\$1,598,000 from Federal sources and \$399,000 from State sources).						



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$17,612,000
Right-of-Way	State/Federal	\$122,972,000
Utilities	Local	\$10,360,000
Construction	State/Federal	\$113,958,000
<b>Project Cost</b>		<b>\$264,901,000</b>

## Location and Environmental Resource Map





## Central Georgia HPC 6 Corridor Management Plan

Photo of location



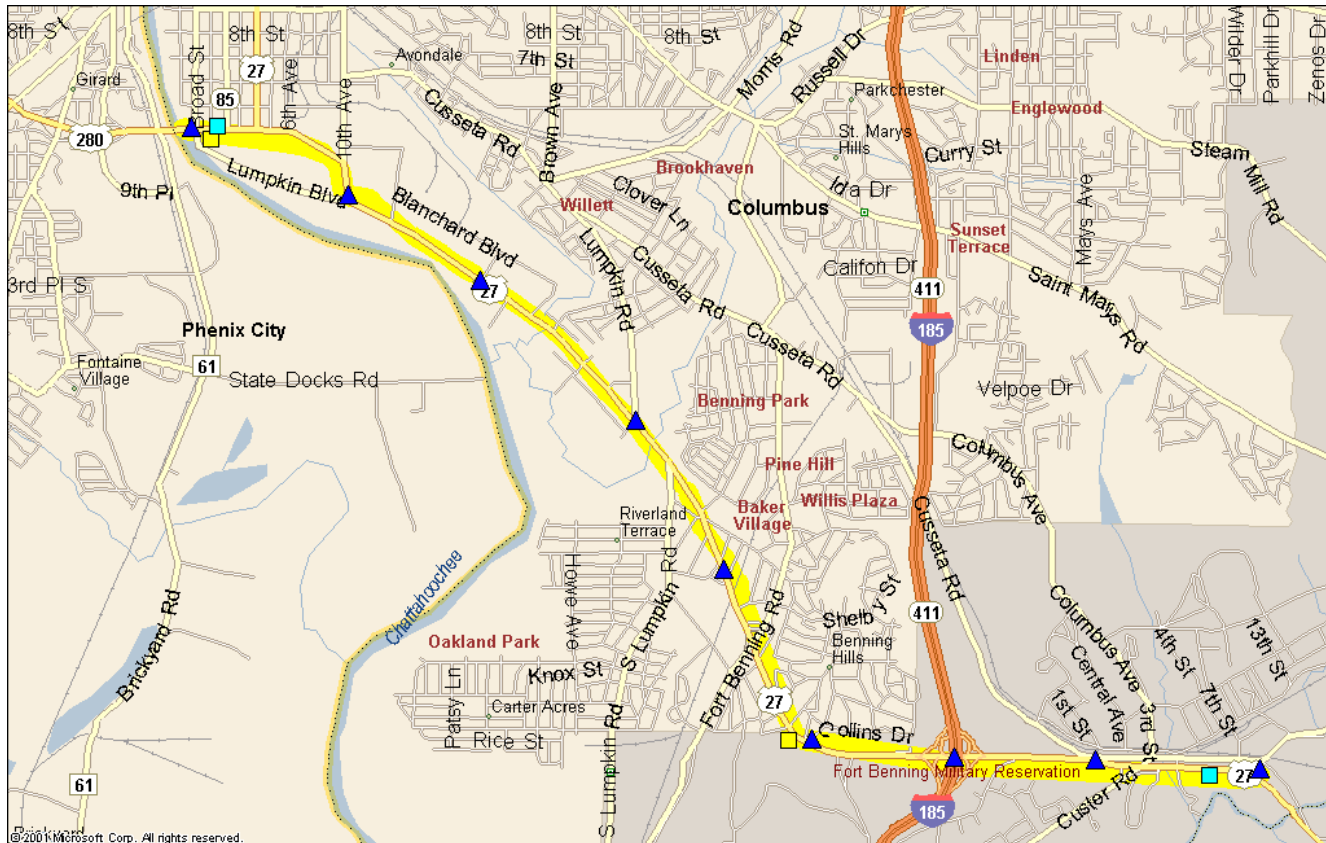
US 27 in Muscogee County





# Central Georgia HPC 6 Corridor Management Plan

## ITS Location Map



### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lanes (12') 14-20' median	4 lane freeway with 2 two-lane frontage roads
Shoulder	12' outside, curb and gutter inside	Freeway and frontage roads: standard sections
Speed Design	45 mph	60 mph for freeway, 45 mph for frontage roads
Additional Design Criteria	Left turn lanes at signals	
Drainage	Enclosed longitudinal drainage	Enclosed longitudinal drainage
Pavement	Asphalt	PCC for freeway; Asphalt for frontage roads
Signals	8 signals with pedestrian provisions	Signals at same locations for frontage roads
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV
Bridges	None	Freeway section will require overpasses
Access Control	Partial	Freeway section: Controlled
Observed Existing Utilities	Transmission lines	
Railroads	None	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Six potential districts and one potential resource (old school house)
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	One community (same as one of the potential historic districts)
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	One cemetery, one church and National Guard Armory
Parks and Recreation	South Park commons complex
Wetlands and Streams	Four stream crossings
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	Yes
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes



## Recommendation Description Initial Cost Estimate

**County** Muscogee  
**Map Code** 178  
**Route** US 27/US 280  
**Location Description** US 27/US 280 from west Georgia State line to 1.5 mi east of I-185  
**Prepared By** David Low  
**Date Last Updated** 12/17/02

### Recommendation Description

4 lane freeway with two-lane one-way frontage roads on each side.  
Noise walls included.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Freeway</u>	6.4		\$6,154,056	\$39,385,958
Source of Unit Cost	FDOT 2000 Transportation Costs		\$3,798,800	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	noise walls and staging construction under traffic: multiply by factor of 1.5			
<u>Two two-lane frontage roads</u>	2	6.4	\$3,499,751	\$44,796,810
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,492,700	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	staging construction under traffic: multiply by factor of 1.3			
<u>Subtotal</u>				\$84,182,769

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
	2	200	45	18,000	\$60
	2	400	45	36,000	\$60
	2	400	45	36,000	\$60
	2	400	45	36,000	\$60
	2	400	45	36,000	\$60
					<u>\$2,160,000</u>
Subtotal					\$9,720,000

### Reinforced Earth Walls

Quantity	Length (ft)	Height (ft)	Area (sq ft)	Unit Cost	Total
4	400	24	19,200	\$60	\$1,152,000
4	400	24	19,200	\$60	\$1,152,000
4	400	24	19,200	\$60	\$1,152,000
4	400	24	19,200	\$60	\$1,152,000
4	400	24	19,200	\$60	<u>\$1,152,000</u>
Subtotal					\$5,760,000

### Signals

2	\$100,000	\$200,000
2	\$100,000	\$200,000
2	\$100,000	\$200,000
2	\$100,000	\$200,000
2	\$100,000	\$200,000
2	\$100,000	\$200,000
2	\$100,000	\$200,000
2	\$100,000	\$200,000

master \$20,000  
 fiberoptic interconnect cable \$150,000  
 Subtotal \$1,770,000

ITS	Component	# Units	Unit Cost	Totals
	CCTV at strategic locations	9	\$ 10,000	\$ 90,000
	Fiber Optic Cable Installed Urban	7.3 mi.	\$ 264,000 per mi.	\$ 1,927,200
	Dynamic Message Signs	2	\$ 48,000	\$ 96,000
	Highway Advisory Radio	2	\$ 26,000	\$ 52,000
				<u>\$ 2,165,200</u>

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial	5.4	120	3,421,440	78.55	\$275,000	\$21,600,000
residential	1.0	120	633,600	14.55	\$125,000	<u>\$1,818,182</u>
land subtotal						\$23,418,182
Improvements Taken						\$8,000,000
Relocation						\$1,500,000
Damages						\$2,500,000
Subtotal						\$35,418,182
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$35,418,182
<u>Scheduling Contingency</u>						\$19,480,000
<u>Admn/Court Cost</u>						\$32,938,909
<u>Inflation Factor</u>						<u>\$35,134,836</u>
<u>Right of Way Total</u>						<b>\$122,971,927</b>

**Summary**

Highway	\$84,182,769	
Bridges	\$9,720,000	
Walls	\$5,760,000	
Signals	\$1,770,000	
ITS	\$ 2,165,200	
Construction Subtotal	\$103,597,969	
CEI	\$10,359,797	10% of construction subtotal
Construction Estimate	\$113,957,766	construction subtotal plus CEI
Preliminary Engineering	\$17,611,655	17% of construction subtotal includes 1% concept, 1% environmental document, 15% design
Right of Way	\$122,971,927	
Utility Relocation	\$10,359,797	10% of construction subtotal
Total Cost	\$264,901,144	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as both a rural and urban interstate. The 3 year accident rate from 1995-1997 on the rural section is 9 as compared to the statewide average of 49 for rural interstates. The urban interstate portion has a rate of 47 as compared to the statewide average of 174. The current AADT is 66,500 and the current volume to capacity ratios range between .84 and .89 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 103,909 and a volume to capacity ratio range between 1.4 and 1.47 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS C and would have operated at a LOS C with the project in place. In 2025, the corridor will operate at a LOS E without the project and a LOS D with the project in place. Implementation of this project will improve the LOS.				County		Bibb	
				Map Code		77	
				Route #		I-75	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Georgia	
				Length		4.8 miles	
				Mileposts			
From: S. Bibb Co. line		To: I-475					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	66,500	103,900	1995-1997 3 year Accident Rate	9 rural interstate and 47 urban interstate			
Truck %:	6%	6%	% Increase in Travel Speed	0%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-75 from six to eight lanes, possibly in the median, with some widening on the outside in a few locations. There is an existing grass median that would be replaced with one new lane in each direction and a concrete median barrier.  Several other projects are planned for this area. A new interchange is planned at I-75 and Sardis Church Road, so this section of I-75 should include ATMS components such as closed circuit television (CCTV) to direct motorists to the airport.  An upgrade to I-75 from I-475 to just south of Hartley Bridge Road is planned (interchange PI # 311465 and bridge PI # 311460).  A new I-75/Sardis Church Road interchange (PI # 311910-) is planned.							



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$1,387,000
Right-of-Way	IM, STP or NHS	\$404,000
Utilities	IM, STP or NHS	\$277,000
Construction	IM, STP or NHS	\$15,260,000
<b>Project Cost</b>		<b>\$17,329,000</b>

## Location and Environmental Resource Map

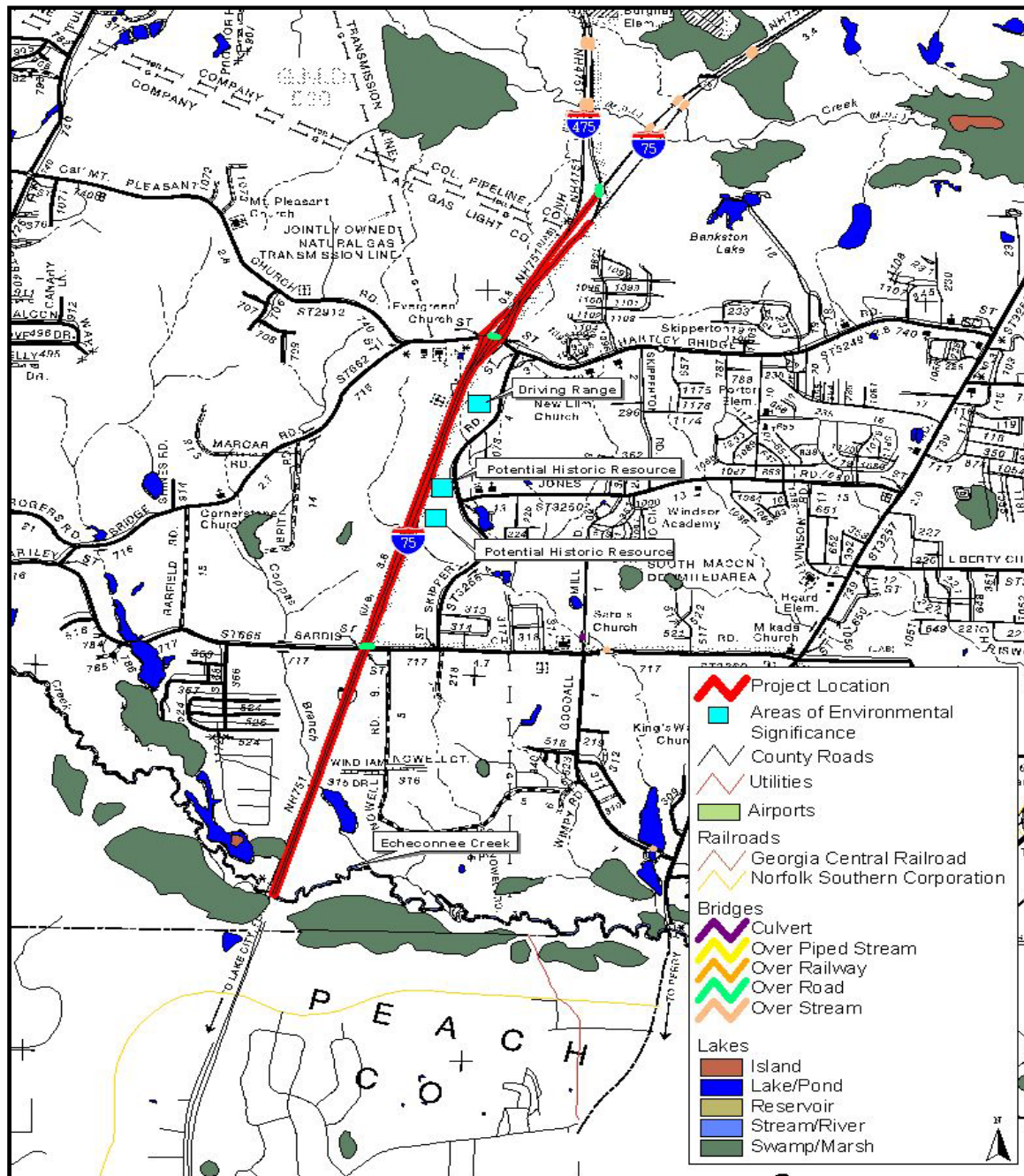


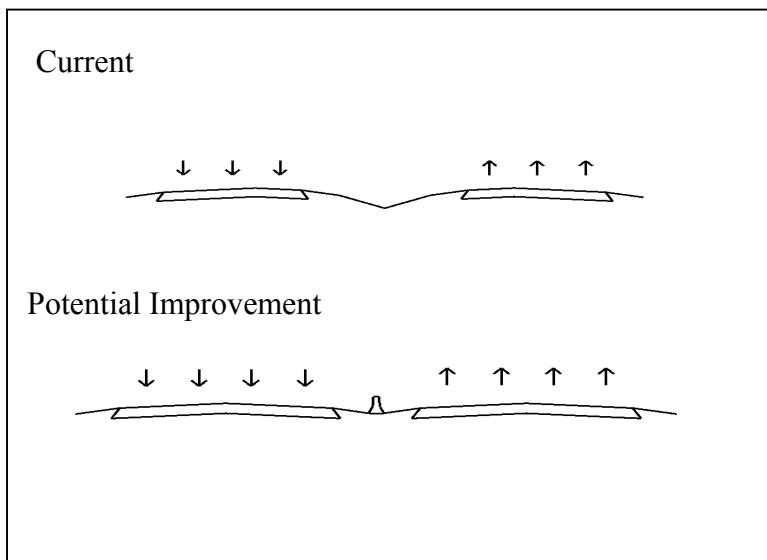


Photo of location



I-75 looking north toward the Hartley Bridge Road interchange.

Typical Sections\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane divided w/ 40' grass median	8 lane divided w/ concrete median barrier
Shoulder	12' outside, 10' inside	Same
Speed Design	70 mph	Same
Pavement	Concrete	Per GDOT Standards
Signals	None	None
Signing and Marking	Striping is worn out	Per GDOT Standards
ITS Opportunities	None	None
Bridges	Hartley Bridge over I-75, Sardis Ch. Rd over I-75, I-75 over Echeconnee Creek	Hartley Bridge & Sardis Ch Rd bridges are to be improved under existing projects. I-75 over Echeconnee Creek is proposed to be widened within the limits of MC 77.
Access Control	Freeway (limited access)	





## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two potential resources
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	Golf course driving range North of MP 155
Wetlands and Streams	Echeconnee Creek at County line
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Bibb  
**Map Code** 77  
**Route** I-75  
**Location Description** I-75 from S Bibb County line to I-475  
**Prepared By** David Low  
**Date Last Updated** 11/11/02

### Recommendation Description

Widen from 6 to 8 lanes, most likely in the median, with perhaps a little widening on the outside in a few locations. There is an existing grass median that would be replaced with one new lane in each direction and a concrete median barrier. A new interchange is planned at I-75 and Sardis Church Road which will become the most direct way to access the Macon Airport, so this section of I-75 should include ATMS components such as CCTV and CMS. DS Atlantic (now Stantec) and Kimley Horn designed the new Sardis Church Road/I-75 interchange.

HNTB designed a project to upgrade I-75 from I-475 to just south of Hartley Bridge Road for the Office of Urban Design. Angela Alexander was the GDOT Project Manager.

### Highway Widening

		Length (mi)	Width	Unit Cost (per mi)	Total
		4.8	2 lanes	\$2,650,212	\$12,721,018
Source of Unit Cost	FDOT 2000 Transportation Costs			\$2,453,900	
Year	2000				
Adjustment to 2002	4% per year is growth factor of 1.08				

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
I-75 over Echeconnee Creek	800	24	19,200	\$60	\$1,152,000

### Signals

none

### ITS

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	4.8	20	506,880	11.64	\$10,000	\$116,364
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$116,364
<u>Net Cost</u>						\$116,364
<u>Scheduling Contingency</u>						\$64,000
<u>Admn/Court Cost</u>						\$108,218
<u>Inflation Factor</u>						\$115,433
<u>Right of Way Total</u>						<b>\$404,015</b>

**Summary**

Highway	\$12,721,018	
Bridges	\$1,152,000	
Signals		
ITS		
Construction Subtotal	\$13,873,018	
CEI	\$1,387,302	10% of construction subtotal
Construction Estimate	\$15,260,319	construction subtotal plus CEI
Preliminary Engineering	\$1,387,302	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$404,015	
Utility Relocation	\$277,460	2% of construction subtotal
Total	\$17,329,096	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, has 14 percent trucks, and therefore, is a freight focused corridor. This roadway segment is classified as a rural interstate. The 3 year accident rate from 1995-1997 for the segment is 44 as compared to the statewide average of 49 for rural interstates. The current AADT is 21,500 and the current volume to capacity ratio is .43. With no improvement, the corridor is anticipated to have an AADT of 37,530 and a volume to capacity ratio of .71 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS C without the project and a LOS B with the project in place. Implementation of this project will improve the LOS.				County		Bryan	
				Map Code		94	
				Route #		I-16	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		4.9 miles	
				Mileposts			
From: East Co. line		To: US 280					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	21,500	37,500	1995-1997 3 year Accident Rate	44 rural interstate			
Truck %:	14%	14%	% Increase in Travel Speed	0%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-16 from four to six lanes. Assume widening to the inside with guardrail as needed.  Four bridges will require widening.							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$1,979,000
Right-of-Way	IM, STP or NHS	\$0
Utilities	Local	\$396,000
Construction	IM, STP or NHS	\$21,769,000
<b>Project Cost</b>		<b>\$24,144,000</b>

### Location and Environmental Resource Map

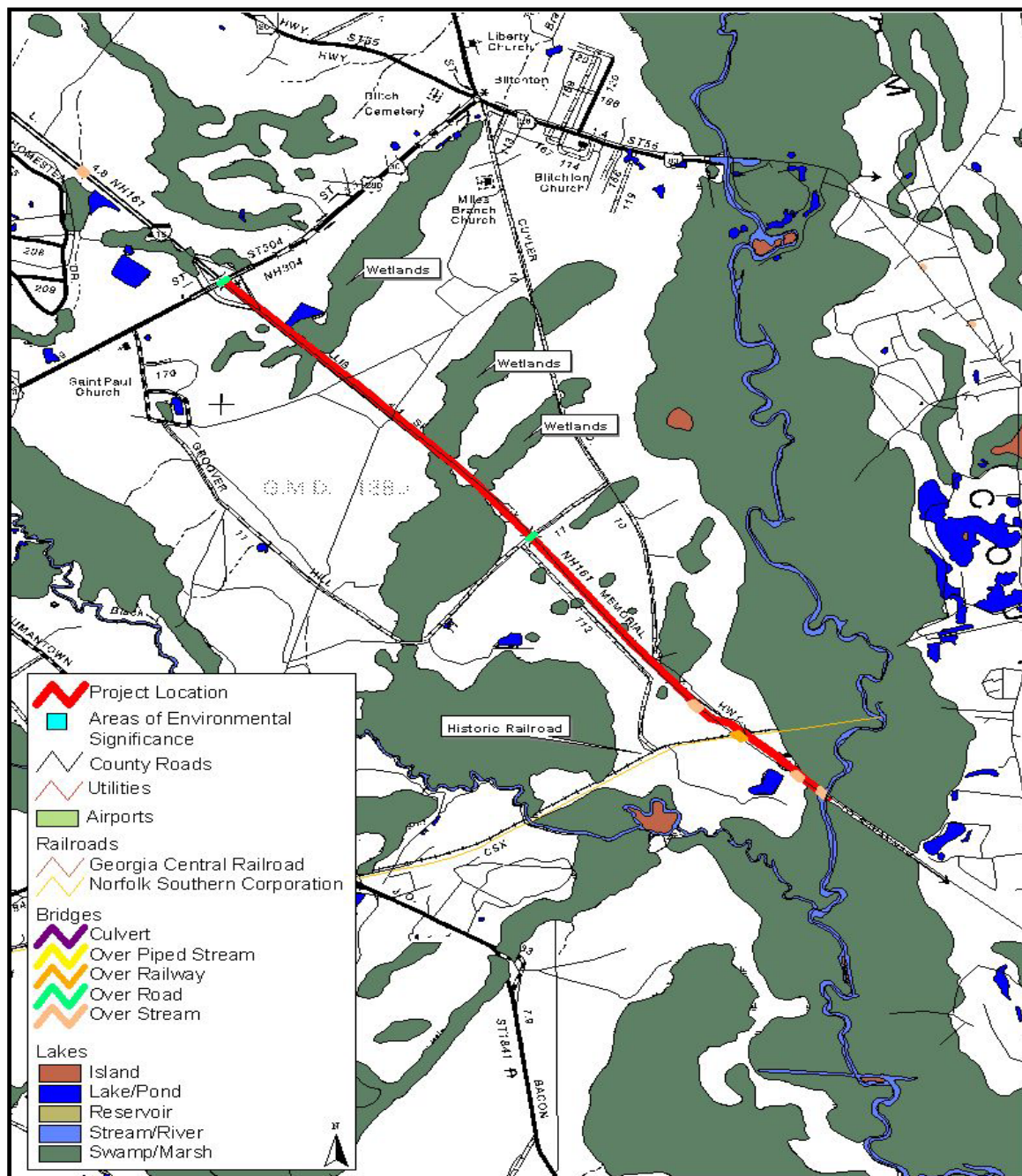


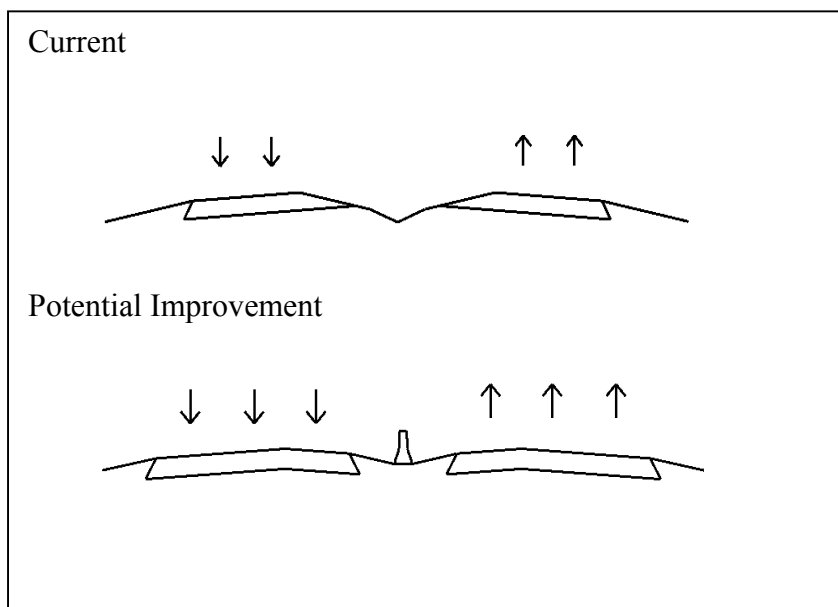


Photo of location



I-16 in Bryan County

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.





## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane freeway	6 lane freeway
Shoulder	4' inside, 12' outside	10' inside, 12' outside
Speed Design	70 mph	Same
Pavement	PCC through lanes, asphalt for shoulders	PCC all
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	Ogeechee River, wetland, railroad, wetland	Same
Railroads	Bridge over railroad west of Ogeechee River	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One railroad crossing
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Ogeechee River and associated wetlands
Wildlife Refuge	N/A
Endangered Species	To be determined during concept phase
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Bryan  
**Map Code** 94  
**Route** I-16  
**Location Description** I-16 from east County line to US 280  
**Prepared By** David Low  
**Date Last Updated** 12/16/02

### Recommendation Description

Widen I-16 from 4 to 6 lanes. Assume widening to the inside with guardrail as needed.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
	4.9		\$2,650,212	\$12,986,039
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,453,900	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
over Ogeechee River	800	42	33,600	\$60	\$2,016,000
wetland	800	42	33,600	\$60	\$2,016,000
railroad	300	42	12,600	\$60	\$756,000
wetland	800	42	33,600	\$60	\$2,016,000
Subtotal					\$6,804,000

### Signals

none

### ITS

none

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
no additional right of way						
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						

Net Cost

Scheduling Contingency

Admn/Court Cost

Inflation Factor

Right of Way Total

**Summary**

Highway	\$12,986,039	
Bridges	\$6,804,000	
Signals	0	
ITS		
Construction Subtotal	\$19,790,039	
CEI	\$1,979,004	10% of construction subtotal
Construction Estimate	\$21,769,043	construction subtotal plus CEI
Preliminary Engineering	\$1,979,004	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$0	
Utility Relocation	\$395,801	2% of construction subtotal
Total	\$24,143,847	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. Traffic congestion exists on this thoroughfare route in Bryan County. The described location is on STRAHNET, has 18 percent trucks, and therefore, is a freight focused corridor. This roadway segment is classified as a rural interstate. The 3 year accident rate from 1995-1997 for this segment is 42 as compared to the statewide average of 49 for rural interstates. The current AADT is 38,600 and the current volume to capacity ratio ranges from .51 to .72 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 62,802 and a volume to capacity ratio ranging between .85 and 1.19 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at LOS B with the project in place. In 2025, the corridor will operate at a LOS D without the project and a LOS C with the project in place. Implementation of the project will improve the LOS.				County		Bryan	
				Map Code		95	
				Route #		I-95	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		11.8 mile deficiency 4.3 mile project	
				Mileposts			
From: 1 mile south of US 17		To: N. Bryan Co. line					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	38,600	62,800	1995-1997 3 year Accident Rate	42 rural interstate			
Truck %:	18%	18%	% Increase in Travel Speed	5%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-95 from six to eight lanes from 1 mile south of US 17 to the northern Bryan County line.  Widening from four to six lanes is under construction from US 17 South to the southern Bryan County line (PI # 511025). Construction is occurring from one mile north of the Jerico River(S. Bryan Co. line) to one mile south of US 17(most of the widening construction from four to six lanes has been done), and from one mile south of the Jerico River to the south Bryan County line(and further south- see map code 159). No further action is recommended on this segment.  ITS solutions are recommended throughout the I-95 corridor in Bryan Co. The system includes Closed Circuit Television (CCTV) monitoring with communication links to the Savannah/Chatham County/GDOT Regional Transportation Control Center to monitor traffic flow in Chatham County. The TCC is scheduled for construction in fiscal year 2025.							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$1,550,000
Right-of-Way	IM, STP or NHS	\$362,000
Utilities	Local	\$310,000
Construction	IM, STP or NHS	\$17,052,000
<b>Project Cost</b>		<b>\$19,274,000</b>

### Location and Environmental Resource Map

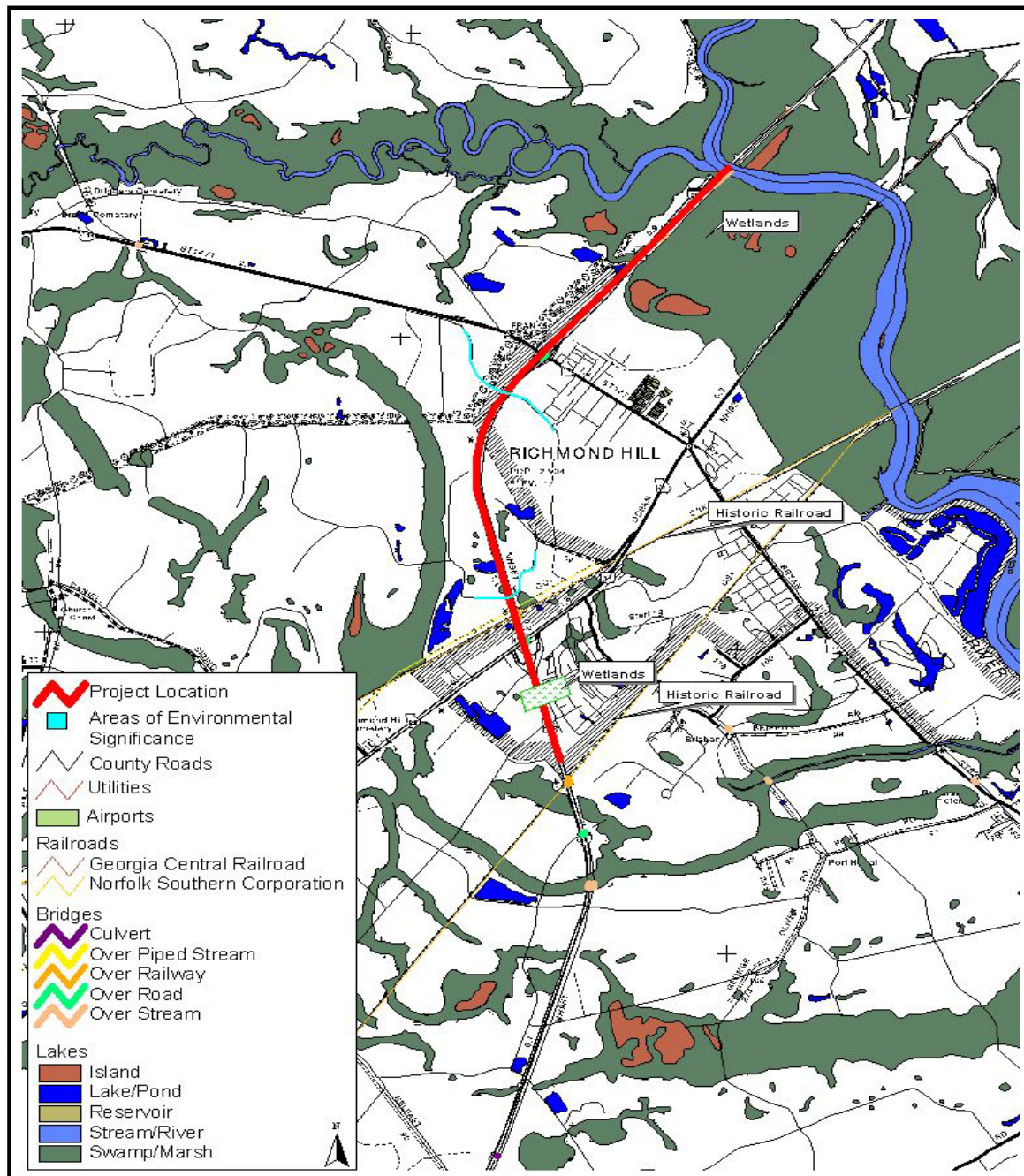




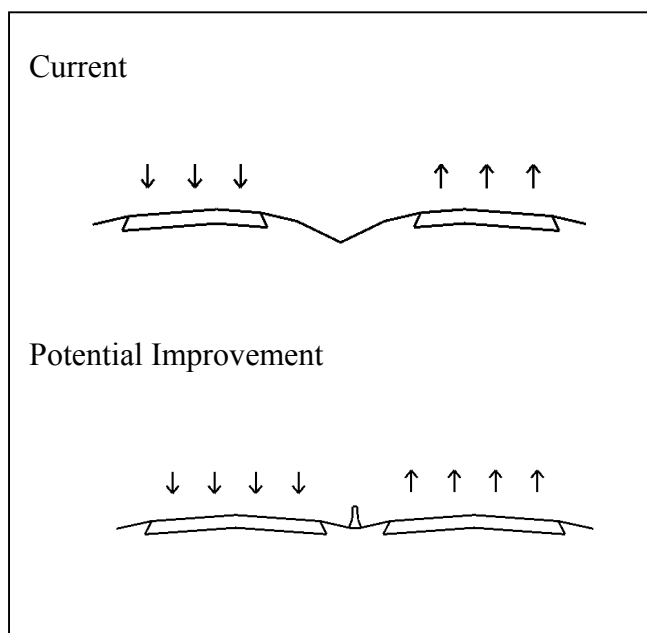


Photo of location



Looking north on I-95 two miles north of Liberty/Bryan County line.

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues

(From field observations)

Issue	Existing		Proposed	
Location	From 1 mile south of US 17 to N. Bryan County line	From S. Bryan Co. line to 1 mile S. of US 17	From 1 mile south of US 17 to N. Bryan County line	From S. Bryan Co. line to 1 mile S. of US 17
Typical Section	6 lane freeway	4 lane freeway	8 lane freeway	6 lane freeway under construction
Shoulder	10’ inside, 12’ outside	4’ inside, 12’ outside	10’ inside, 12’ outside	10’ inside, 12’ outside
Speed Design	70 mph	70 mph	Same	Same
Additional Design Criteria	Noise wall on E. side of I-95 for ½ mile S. of US 17 interchange		Same	
Pavement	Asphalt		Same	
Signing and Marking	Per GDOT Standards		Per GDOT Standards	
ITS Opportunities	None		CCTV	
Bridges	Ogeechee River, wetland, SR144, RR, US17, RR, marsh, marsh		Same	
Railroads	Two bridges over railroads (N and S of US17)			



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two Railroad crossings
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Multiple streams and wetlands. Jerico River at South County line, and Ogeechee River at North County line.
Wildlife Refuge	N/A
Endangered Species	Potential foraging and nesting habitat for Bald eagle and Wood stork
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes



**Summary**

Highway	\$11,395,912	
Bridges	\$1,152,000	
Signals	0	
ITS	<u>\$ 2,954,000</u>	
Construction Subtotal	\$15,501,912	
CEI	\$1,550,191	10% of construction subtotal
Construction Estimate	\$17,052,103	construction subtotal plus CEI
Preliminary Engineering	\$1,550,191	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$361,930	
Utility Relocation	\$310,038	2% of construction subtotal
Total	\$19,274,262	





## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

<b>NEED AND PURPOSE:</b> The purpose of the project is to reduce congestion and create a safer environment for freight movement. Significant traffic exists on this thoroughfare route entering and exiting the Savannah area. Freight flow is heavily impeded due to dense commercial and residential traffic. The described location is on STRAHNET and, therefore, is a freight focused corridor. This segment of roadway is classified as both a rural and an urban interstate. The 3 year accident rate from 1995-1997 for the rural section is 92 as compared to the statewide average of 49 for rural interstates. The 3 year accident rate for the section classified as an urban interstate is 282 as compared to the statewide average of 174. The current AADT is 36,600 and the current volume to capacity ratio ranges between .43 and .73 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 61,761 and a volume to capacity ratio ranging from .71 to 1.2 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS C and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS E without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Chatham	
				Map Code		105	
				Route #		I-16	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		13.4 miles	
				Mileposts			
From: Effingham Co. line		To: End of I-16 in downtown Savannah					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	36,600	61,700	1995-1997 3 year Accident Rate	92 rural interstate and 282 urban interstate			
Truck %:	6%	6%	% Increase in Travel Speed	10%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-16 from four to six lanes (inside widening) from Effingham/Chatham County line to I-516. Reconstruct I-16/I-95 interchange to eliminate built-in wearing associated with cloverleaf configuration of ramps. Reconstruct I-16/I-516 interchange to eliminate left entrance ramps with adverse driver expectancy.  The project includes installation of Dynamic Message Signs (DMS), Highway Advisory Radio (HAR), Closed Circuit Television (CCTV) monitoring, and communication links to Savannah Ports Authority. The project involves inclusion into Savannah/Chatham County/GDOT Regional Transportation Control center to monitor port related traffic flow and provide traveler information to both automobile and truck traffic. This advance information can facilitate the re-routing of port traffic thereby reducing congestion on and around I-16.  Incremental costs for this project can be shared with existing plans for Savannah Port connection as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019" Years 1 -5 (p 13).  Other possible funding vehicles would be to share incremental costs with projects contained in the current Chatham County TIP. The ITS solutions recommended above could be a subset of the Savannah/Chatham County/GDOT Regional Transportation Control Center. The cost of constructing the TCC is \$1 million with funding from Federal/State sources and is scheduled for Construction in FY 2005. (See Savannah TIP page 11).							



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$5,683,000
Right-of-Way	N/A	\$0
Utilities	Local	\$1,137,000
Construction	IM, STP or NHS	\$62,516,000
<b>Project Cost</b>		<b>\$69,336,000</b>

### Location and Environmental Resource Map

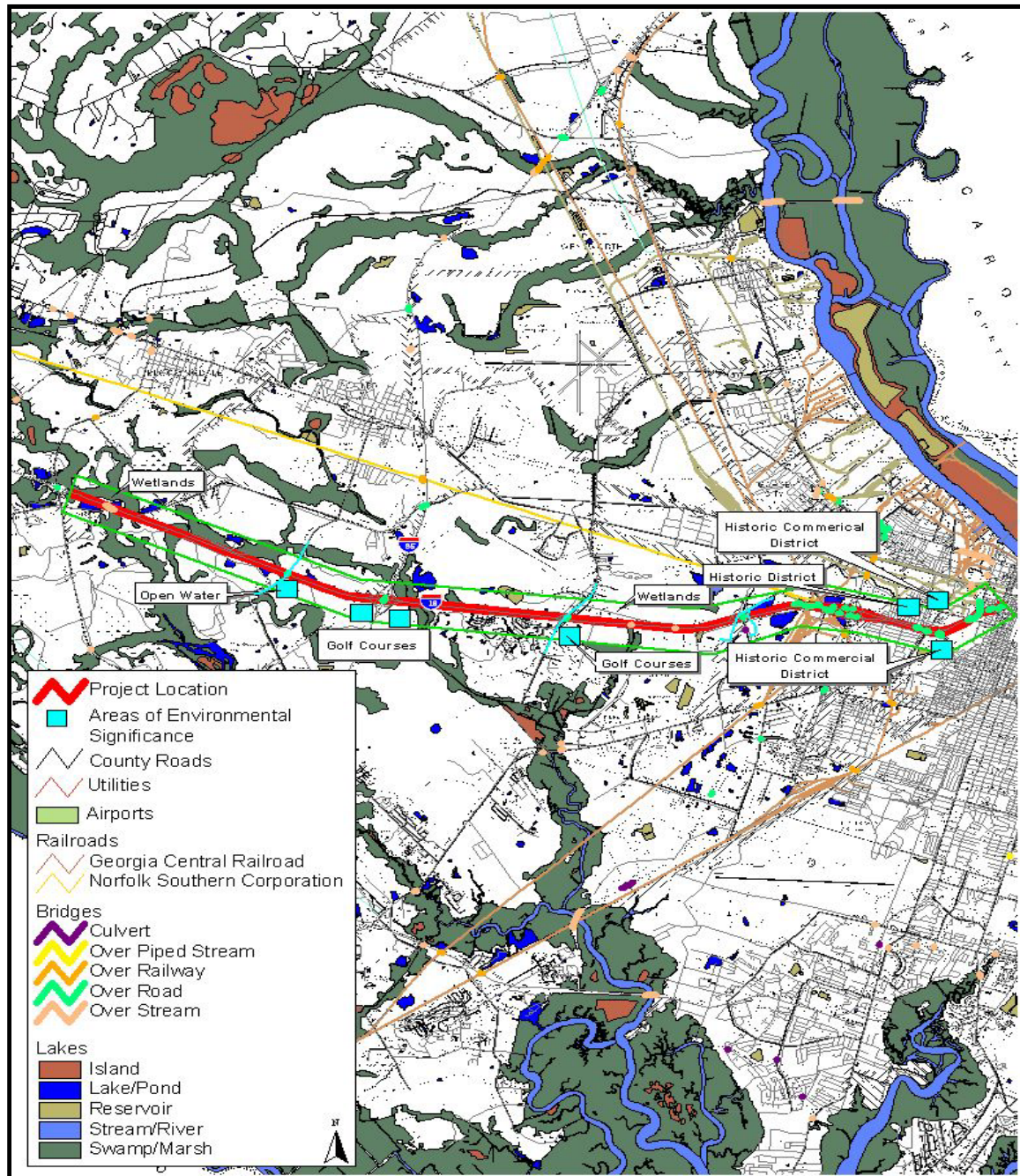


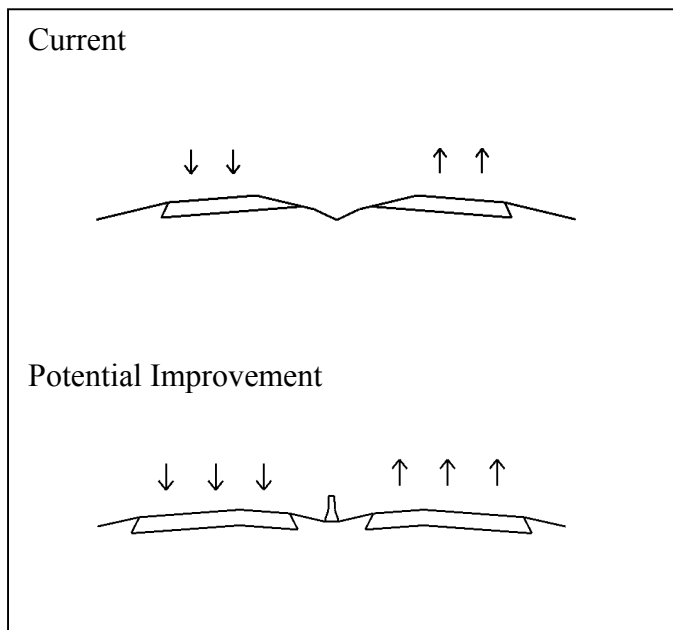


Photo of location



Looking westbound on I-16 west of Chatham Rd interchange

Typical Sections\*



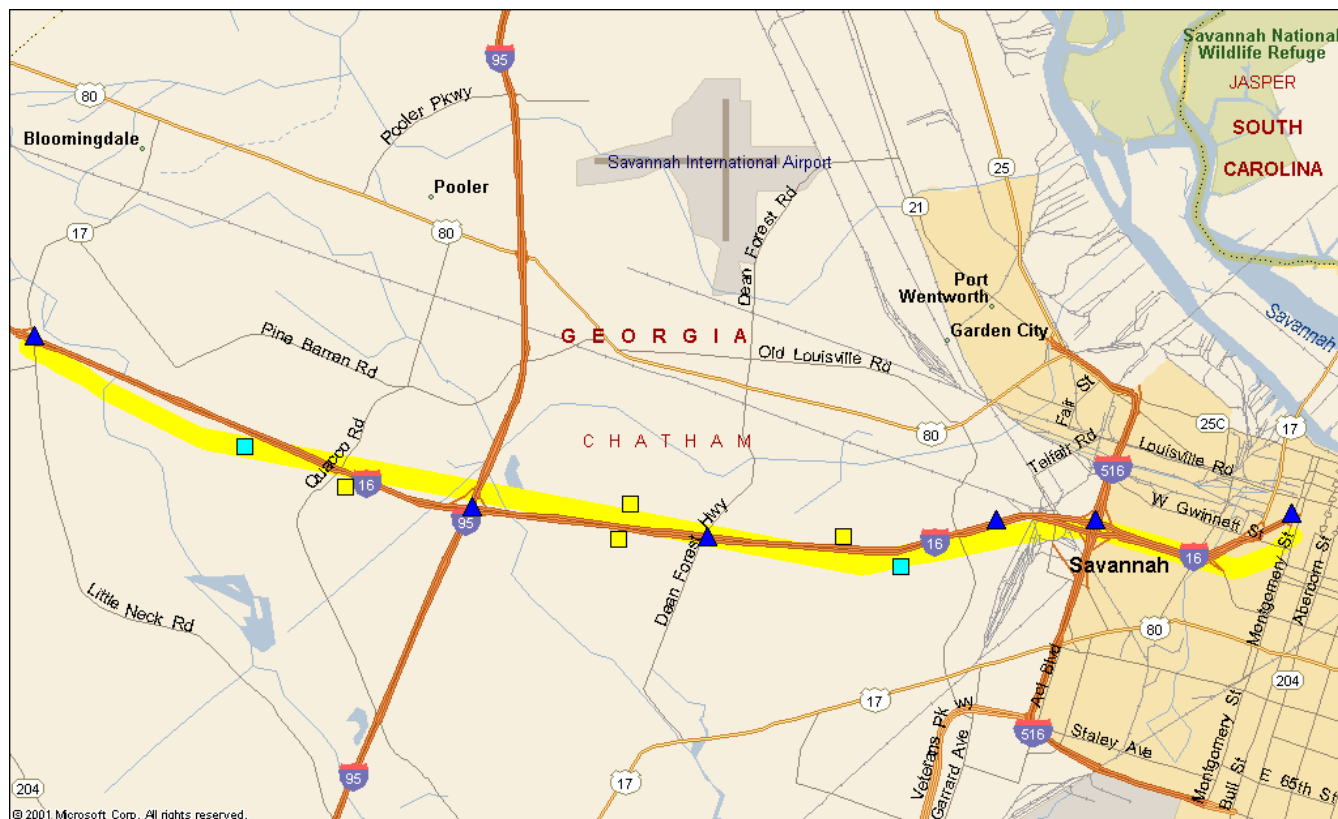
\*Typical Sections don not included acceleration, deceleration, or left turn lanes.





## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane freeway from Montgomery to I-516, 4 lane freeway from Effingham County line to I-516	6 lane freeway from Effingham County line to I-516
Shoulder	10' outside shoulders, 12' inside shoulders	10' inside, 12' outside
Speed Design	55 mph speed limit, 70 mph design speed	Same
Observed Substandard Design Features	Left entrance ramps at I-16/I-516 interchange. Dean Forest Road interchange has short ramps & heavy truck volume to and from the west.	I-16/I-516 interchange is proposed to be reconstructed.
Observed Safety Concerns	Built in weaving sections at I-16/I-95 interchange	I-16/I-95 interchange is proposed to be reconstructed.
Drainage	Bridge over canal at Stiles Avenue	Same
Pavement	PCC mainline lanes with asphalt shoulders	PCC throughout including shoulders
Signals	None	None
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	Port related CMS EB approaching Dean Forest Road interchange, CCTV, CMS approaching I-95 & I-516
Bridges	Over wetland east of Bloomingdale Road, Over railroad yard west of I-516, Over 3RR tracks immediately west of I-516, Over I-516, over I-516 ramp	Same
Observed Existing Utilities	Power line crosses over I-16 just east of Effingham/ Chatham County line	
Railroads	Two separate bridges over railroads west of I-516	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Three potential historic districts
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	Two golf courses
Wetlands and Streams	Numerous wetlands and streams
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes



## Recommendation Description Initial Cost Estimate

**County** Chatham  
**Map Code** 105  
**Route** I-16  
**Location Description** I-16 from Effingham Co line to end of I-16 in downtown Savannah  
**Prepared By** David Low  
**Date Last Updated** 12/16/02

### Recommendation Description

widen from 4 to 6 lanes from Effingham Co line to I-516  
 reconstruct I-16/I-95 interchange  
 reconstruct I-16/I-516 interchange

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Part 1 - widening</u>	11.2		\$3,158,352	\$35,373,542
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,924,400	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
<u>Part 2 - I-95 interchange reconstruction (including structures)</u>				\$5,000,000
Source of Unit Cost	judgment			
<u>Part 3 - I-516 interchange reconstruction Including structures)</u>				\$5,000,000
Source of Unit Cost	judgment			
<u>Subtotal</u>				\$45,373,542

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
over wetland E of Bloomingdale Road	800	42	33,600	\$60	\$2,016,000
over railroad yard west of I-516	1500	42	63,000	\$60	\$3,780,000
over 3 RR tracks immediately west of I-516	500	42	21,000	\$60	<u>\$1,260,000</u>
Subtotal					\$7,056,000

### Signals

none

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic loca	6	\$ 10,000	\$ 60,000
Fiber Optic Cable Inst	14.4 mi.	\$ 264,000 per mi.	\$ 3,801,600
HAR	2	\$ 31,000	\$ 62,000
Dynamic Message Sig	4	\$ 120,000	<u>\$ 480,000</u>
			\$ 4,403,600

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						
<u>Scheduling Contingency</u>						
<u>Admn/Court Cost</u>						
<u>Inflation Factor</u>						
<u>Right of Way Total</u>						

**Summary**

Highway	\$45,373,542	
Bridges	\$7,056,000	
Signals	0	
ITS	<u>\$ 4,403,600</u>	
Construction Subtotal	\$56,833,142	
CEI	\$5,683,314	10% of construction subtotal
Construction Estimate	\$62,516,457	construction subtotal plus CEI
Preliminary Engineering	\$5,683,314	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$0	
Utility Relocation	\$1,136,663	2% of construction subtotal
Total	\$69,336,434	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

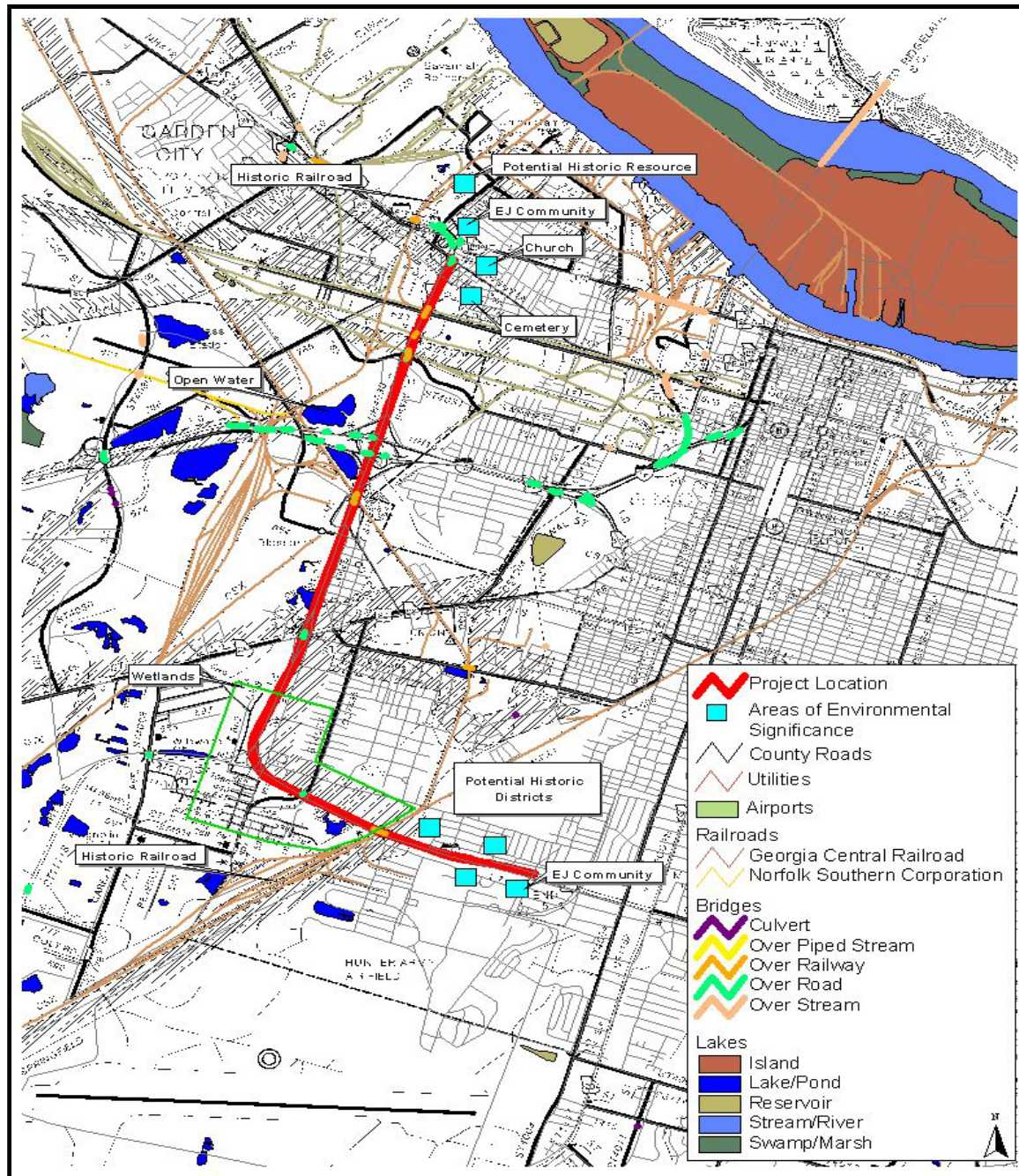
<b>NEED AND PURPOSE:</b> The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified into three categories as an urban principal arterial, an urban expressway, and an urban interstate. The 3 year accident rate from 1995–1997 along the arterial portion is 145 as compared to the statewide average of 174. The expressway portion has an accident rate of 266 as compared to the statewide average of 225. The interstate section has an accident rate of 244 as compared to the statewide average of 586 for urban interstates. The current AADT is 53,700 and the current volume to capacity ratio ranges between .69 and 1.1 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 94,112 and a volume to capacity ratio ranging between 1.15 and 1.83 by 2025, indicating congestion. In 1998 the corridor operated at a LOS D and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS F without the project and at a LOS D with the project in place. Implementation of this project will improve the LOS.				County	Chatham	
				Map Code	106	
				Route #	I-516	
				GDOT District	5	
				Cong. District	1, 12	
				RDC	Coastal Georgia	
				Length	6.3 miles	
				Mileposts		
From: Veterans Pkwy.		To: Derenne Ave.				
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes
Traffic Vol.:	53,700	94,100	1995-1997 3 year Accident Rate	145 urban principal arterial, 266 urban expressway, 244 urban interstate		
Truck %:	6%	6%	% Increase in Travel Speed	10%	% Increase in Capacity	50%
No. of Lanes	4	6	% Shift in Non-Freight	0%		
<b>PROJECT DESCRIPTION:</b>  Widen I-516 from four to six lanes. The section from Veterans Parkway to Derenne Avenue will require some outside widening because of a relatively narrow raised grass median. From Veterans Parkway to SR 21, widen to inside.  The system includes closed circuit Television (CCTV) monitoring, communication links to Savannah/Chatham County/GDOT Regional Transportation Control center (TCC), and a dynamic message sign. The project involves inclusion into Savannah TCC to monitor traffic flow and provide traveler information to both automobile and truck traffic.  Incremental costs for this project can be shared with existing plans for Savannah fiber optic cable installation on I-516 as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019" Years 1 -5 (p 29).  Other possible funding vehicles would be to share incremental costs with projects contained in the current Chatham County TIP. The ITS solutions recommended above could be a subset of the Savannah/Chatham County/GDOT Regional Transportation Control center. The cost of constructing the TCC is \$1 million with funding from Federal/State sources and is scheduled for Construction in FY 2005. (See Savannah TIP page 11).						



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$3,028,000
Right-of-Way	IM, STP or NHS	\$5,366,000
Utilities	Local	\$1,211,000
Construction	IM, STP or NHS	\$33,305,000
<b>Project Cost</b>		<b>\$42,910,000</b>

Location and Environmental Resource Map





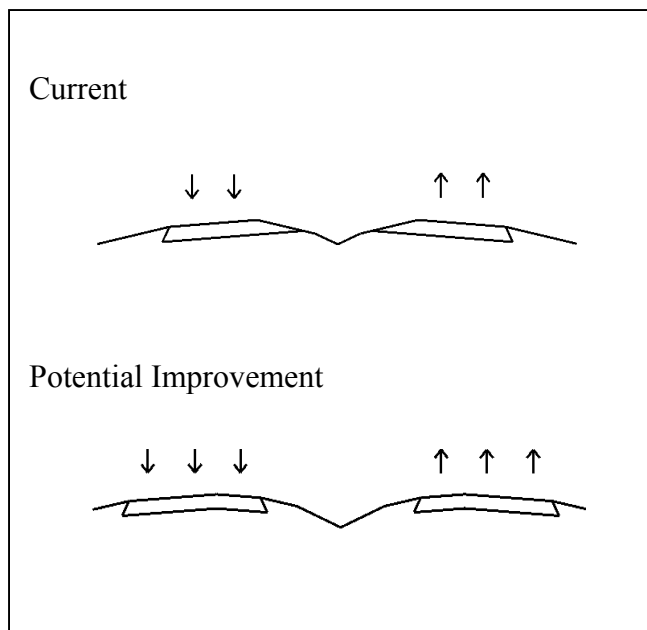
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



**Looking east on I-516 toward Montgomery Street.  
Note raised grass median with no inside shoulder.**

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.





# Central Georgia HPC 6 Corridor Management Plan

## ITS Location Map



### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane freeway w/ raised grass median from Derenne Ave to Veterans Pkwy, 4 lane freeway w/ depressed grass median from Veterans Pkwy to SR 21.	6 lane freeway
Shoulder	Derenne to Veterans-no inside shoulder, otherwise 12' outside asphalt, 4' inside asphalt	10' inside PCC, 12' outside PCC
Speed Design	55 mph	Same
Pavement	Shoulders asphalt, PCC through lanes, some longitudinal cracking of PCC	Survey to identify failures, then replace selectively
Signals	None	None
Signing and Marking	Per GODT Standards	Per GODT Standards
ITS Opportunities	Dynamic Message Sign (DMS)	CCTV, DMS approaching I-16, and fiber optic cable
Bridges	Bay St, Augusta Ave, road, railroad, RR & road, RR & Tremont Ave, US 17	
Observed Existing Utilities	Electrical transmission line and substation east of Veterans Pkwy interchange	
Railroads	Several bridges over railroads	





## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Three potential districts and several potential resources
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	Two communities
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	One church, one cemetery
Parks and Recreation	N/A
Wetlands and Streams	One Stream with associated wetlands and one open water
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Chatham  
**Map Code** 106  
**Route** I-516  
**Location Description** I-516 from SR 21 interchange in Garden City to Derenne Avenue  
**Prepared By** David Low  
**Date Last Updated** 12/16/02

### Recommendation Description

Widen freeway from 4 to 6 lanes.  
 The section from Veterans Parkway to Derenne Ave will require some outside widening because of a relatively narrow raised median.  
 From Veterans Parkway to SR 21, widen to inside.  
 Include selective pavement replacement for longitudinal cracking.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1 - SR 21 to Veterans Parkway</u>	4.6		\$2,774,520	\$12,762,792
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,569,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
<u>Segment 2 - Veterans Parkway to Derenne Ave</u>	1.7		\$2,774,520	\$4,716,684
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,569,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
<u>Selective Pavement Replacement</u>				\$5,000,000
<u>Subtotal</u>				\$22,479,476

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Bay Street	300	42	12,600	\$60	\$756,000
Augusta Ave	300	42	12,600	\$60	\$756,000
road	300	42	12,600	\$60	\$756,000
RR	300	42	12,600	\$60	\$756,000
RR & road	400	42	16,800	\$60	\$1,008,000
RR & Tremont Ave	400	42	16,800	\$60	\$1,008,000
US 17	300	42	12,600	\$60	<u>\$756,000</u>
Subtotal					\$5,796,000

### Signals

none

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic loca	6	\$ 10,000	\$ 60,000
Fiber Optic Cable Inst	6.9 mi.	\$ 264,000 per mi.	\$ 1,821,600
Dynamic Message Sig	1	\$ 120,000	\$ 120,000
			<u>\$ 2,001,600</u>

**Right of Way**

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial					\$275,000	
industrial	1.7	30	269,280	6.18	\$250,000	\$1,545,455
residential					\$55,000	
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$1,545,455
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						\$1,545,455
<u>Scheduling Contingency</u>						\$850,000
<u>Admn/Court Cost</u>						\$1,437,273
<u>Inflation Factor</u>						<u>\$1,533,091</u>
<u>Right of Way Total</u>						<b>\$5,365,818</b>

**Summary**

Highway	\$22,479,476	
Bridges	\$5,796,000	
Signals	0	
ITS	<u>\$ 2,001,600</u>	
Construction Subtotal	\$30,277,076	
CEI	\$3,027,708	10% of construction subtotal
Construction Estimate	\$33,304,784	construction subtotal plus CEI
Preliminary Engineering	\$3,027,708	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$5,365,818	
Utility Relocation	\$1,211,083	4% of construction subtotal
Total	\$42,909,392	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as both a rural and an urban interstate. The 3 year accident rate from 1995-1997 for the rural interstate section is 168 as compared to the statewide average of 49. The 3 year accident rate for the urban section is 276 as compared to the statewide average of 174 for urban interstates. The current AADT is 45,400 and the current volume to capacity ratio ranging from .59 to .77 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 79,309 and a volume to capacity ratio ranging between .93 and 1.28 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS D without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Chatham	
				Map Code		107	
				Route #		I-95	
				GDOT District		5	
				Cong. District		12	
				RDC		Coastal Georgia	
				Length		20.2 miles	
				Mileposts			
From: N. Chatham Co. line		To: S. Chatham Co. line					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	45,400	79,300	1995-1997 3 year Accident Rate	168 rural interstate and 276 for urban interstate			
Truck %:	6%	6%	% Increase in Travel Speed	0%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			

**PROJECT DESCRIPTION:**

Widen I-95 from six to eight lanes. Widen to the outside.

The project includes installation of Dynamic Message Signs (DMS), Highway Advisory Radio (HAR), closed circuit television (CCTV) monitoring, communication links to Savannah/Chatham County/GDOT Regional Transportation Control center to monitor port related traffic flow and provide traveler information to both automobile and truck traffic. This advance information can facilitate the re-routing of port traffic thereby reducing congestion on and around I-95.

The system includes highway advisory radio, CCTV, and dynamic message signs.

Incremental costs for this project can be shared with existing plans for Savannah traffic management as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019" Years 1 -5 (p 13).

Other possible funding vehicles would be to share incremental costs with projects contained in the current Chatham County TIP. The ITS solutions recommended above could be a subset of the Savannah/Chatham County/GDOT Regional Transportation Control center. The cost of constructing the TCC is \$1 million with funding from Federal/State sources and is scheduled for Construction in FY 2005. (See Savannah TIP page 11).



## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$7,353,000
Right-of-Way	IM, STP or NHS	\$4,081,000
Utilities	Local	\$1,471,000
Construction	IM, STP or NHS	\$80,882,000
<b>Project Cost</b>		<b>\$93,786,000</b>

Location and Environmental Resource Map

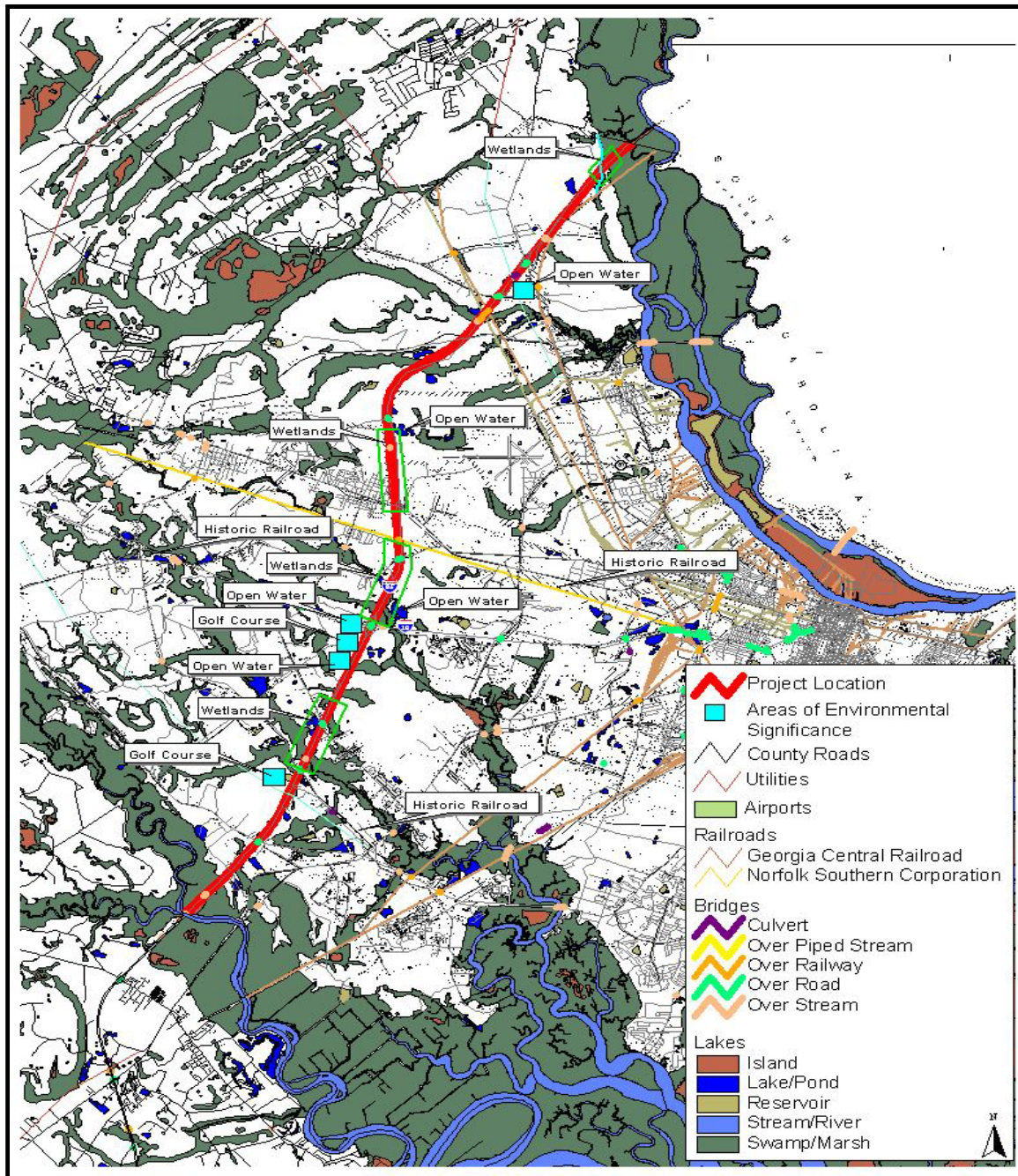


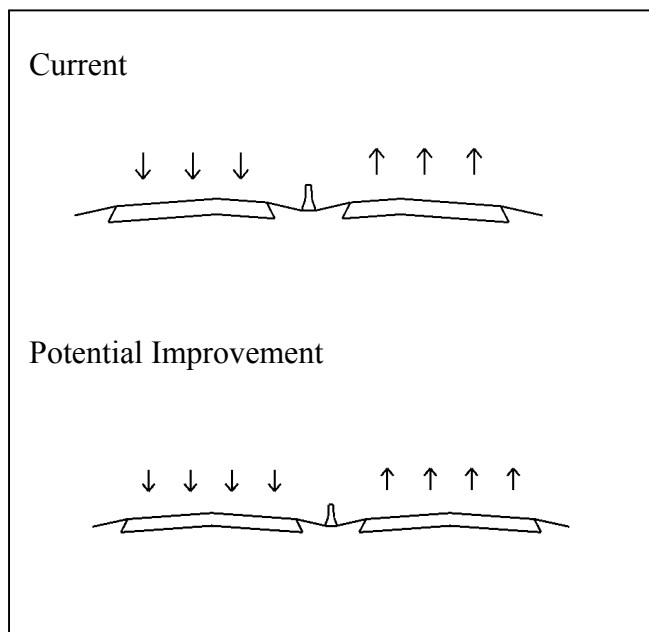


Photo of location



Looking south on I-95 south of SR 204

Typical Section\*

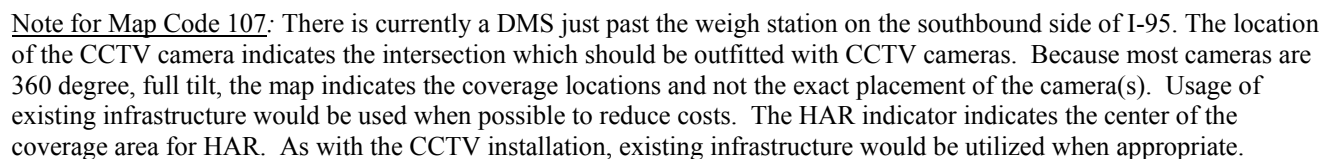


\*Typical sections do not include acceleration, deceleration, or left turn lanes.





## ITS Location Map



### LEGEND

-  - Project Location  
 - CCTV (Closed Circuit Television) - Proposed  
 - Dynamic Fog Detection System - Proposed  
 - DMS (Dynamic Message Sign) – Already Installed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane freeway	8 lane freeway
Shoulder	10' inside, 12' outside	Same
Speed Design	70 mph	Same
Pavement	Asphalt	Same
Signals	None	None
Signing and Marking	Per GODT Standards	Per GODT Standards
ITS Opportunities	DMS	CCTV at I-16 interchange and SR 21 interchange (port related); CMS at SR 204 interchange and I-16 interchange, HAR
Bridges	Savannah River, wetland, SR 21, 2 RRs, St. Augustine Creek, Pipe Makers Canal, US 80, RR, I-16, SR 204	Same
Railroads	Three bridges over railroads	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two railroad crossings
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	Two Golf courses
Wetlands and Streams	Multiple wetlands and streams
Wildlife Refuge	N/A
Endangered Species	Potential foraging and nesting habitat for Bald eagle and Wood stork
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	Yes
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Chatham  
**Map Code** 107  
**Route** I-95  
**Location Description** I-95 from S to N Chatham Co line  
**Prepared By** David Low  
**Date Last Updated** 12/16/02

### Recommendation Description

Widen from 6 to 8 lanes. Widen to the outside.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Segment 1</u>	20.2		\$3,158,352	\$63,798,710
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,924,400	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Savannah River	3500	0	0	\$60	\$0
wetland	2000	0	0	\$60	\$0
SR 21	300	24	7,200	\$60	\$432,000
2 RR's	300	24	7,200	\$60	\$432,000
St. Augustine Creek	600	24	14,400	\$60	\$864,000
Pipe Makers Canal	500	24	12,000	\$60	\$720,000
US 80	300	24	7,200	\$60	\$432,000
RR	300	24	7,200	\$60	\$432,000
I-16	400	24	9,600	\$60	\$576,000
SR 204	350	24	8,400	\$60	<u>\$504,000</u>
Subtotal					\$4,392,000

### Signals

none

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic locations	3	\$10,000	\$30,000
Fiber Optic Cable Installed Urban	19 mi.	\$264,000 per mi.	\$5,016,000
Dynamic Message Sign	2	\$120,000	\$240,000
Highway Advisory Radio	2	\$26,000	<u>\$52,000</u>
			\$5,338,000

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	20.2	24	2,559,744	58.76	\$20,000	\$1,175,273
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$1,175,273
<u>Net Cost</u>						\$1,175,273
<u>Scheduling Contingency</u>						\$646,400
<u>Admn/Court Cost</u>						\$1,093,004
<u>Inflation Factor</u>						<u>\$1,165,871</u>
<u>Right of Way Total</u>						<b>\$4,080,547</b>

**Summary**

Highway	\$63,798,710	
Bridges	\$4,392,000	
Signals	0	
ITS	\$5,338,000	
Construction Subtotal	\$73,528,710	
CEI	\$7,352,871	10% of construction subtotal
Construction Estimate	\$80,881,581	construction subtotal plus CEI
Preliminary Engineering	\$7,352,871	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$4,080,547	
Utility Relocation	\$1,470,574	2% of construction subtotal
Total	\$93,785,574	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as both a rural and an urban interstate. The 3 year accident rate from 1995-1997 for the rural section is 74 as compared to the statewide average of 49 for rural interstates. The 3 year accident rate for the urban interstate portion is 59 as compared to the statewide average of 174. The current AADT is 35,200 and the current volume to capacity ratio ranges from .63 to 1.02 along the corridor. With no improvement, the corridor is anticipated to have an AADT of 55,056 and a volume to capacity ratio ranging between 1.05 and 1.68 by 2025, indicating congestion along the corridor. In 1998, the corridor operated at a LOS B and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS D without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Crisp	
				Map Code		129	
				Route #		I-75	
				GDOT District		4	
				Cong. District		2	
				RDC		Middle Flint	
				Length		15 miles	
				Mileposts			
From: S. Crisp Co Line (MP 90)		To: N. Crisp Co Line (MP 105)					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	35,200	55,056	1995-1997 3 year Accident Rate	74 rural interstate 59 urban interstate			
Truck %:	29%	29%	% Increase in Travel Speed	0%	% Increase in Capacity	100%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-75 from six to eight lanes through Crisp county.  Mile post 90 to 99 is under construction, widening from four to six lanes. PI # HPP-NH-75-1(156)CT 1							

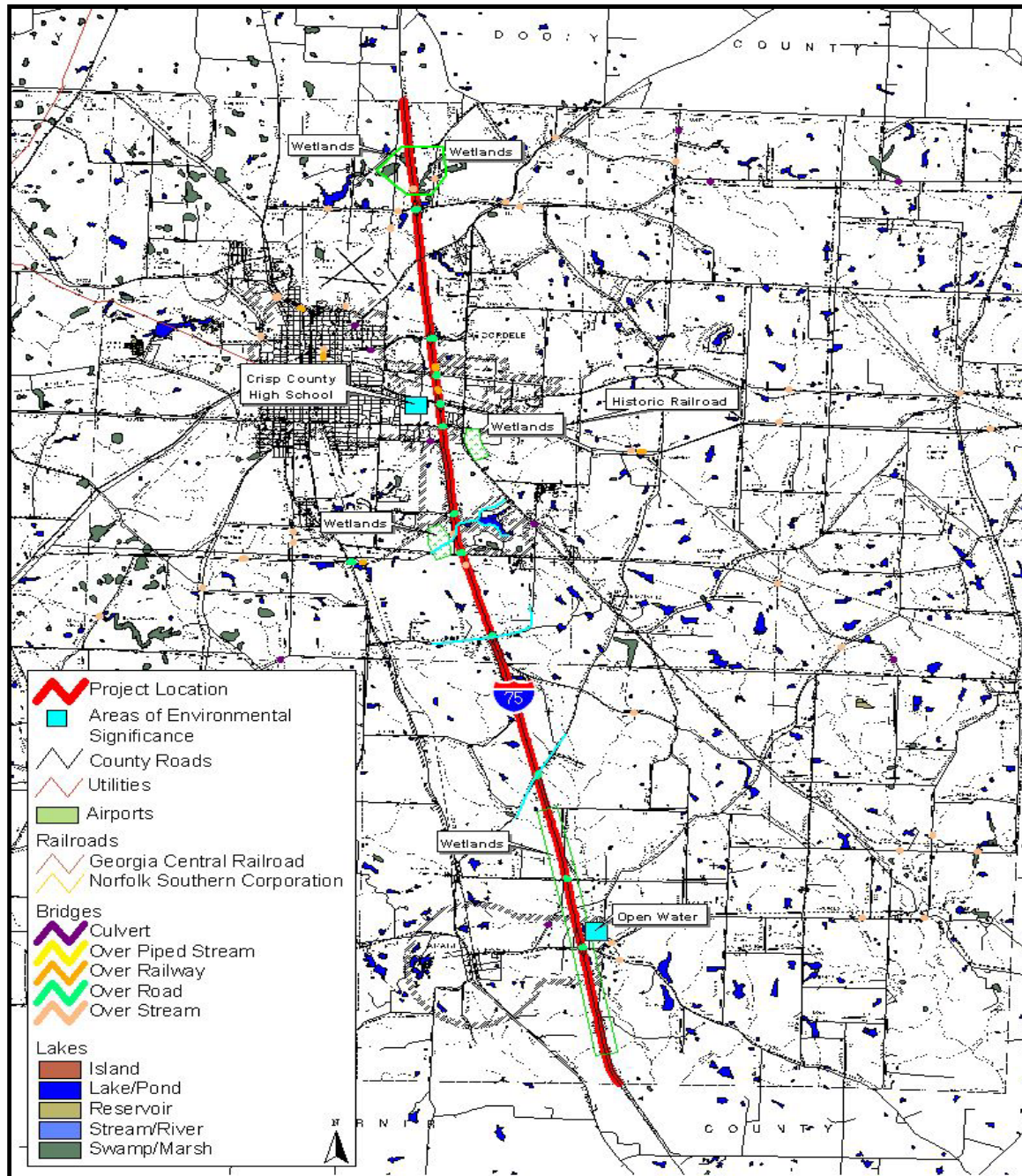




## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP, or NHS	\$4,858,000
Right-of-Way	IM, STP, or NHS	\$10,460,000
Utilities	Local	\$972,000
Construction	IM, STP, or NHS	\$53,436,00
<b>Project Cost</b>		<b>69,726,000</b>

Location and Environmental Resource Map





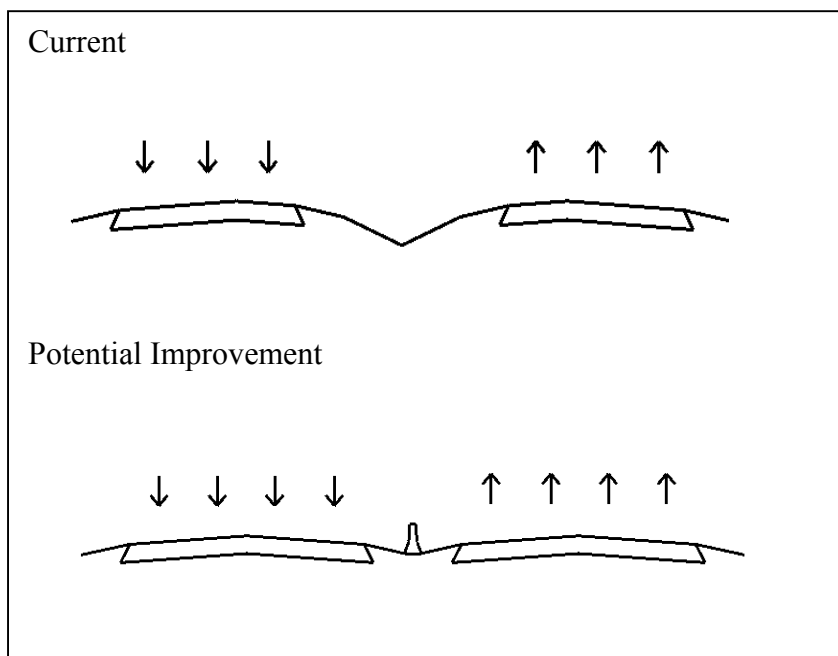
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



I-75 in Crisp County

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane freeway 12' lanes 4 lane freeway Mile post 90-99 (currently under construction to widen to 6')	8 lanes – 12' foot lanes
Shoulder	10' outside	12' outside
Speed Design	70 mph	70 mph
Pavement	Asphalt	PCC
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	12	12
Access Control	Controlled	Controlled



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One railroad crossing
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	Crisp County high school and associated ball fields
Parks and Recreation	N/A
Wetlands and Streams	Several wetlands and streams
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Crisp  
**Map Code** 129  
**Route** I-75  
**Location Description** I-75 from S Crisp County line to N Crisp County line  
**Prepared By** David Low  
**Date Last Updated** 12/16/02

### Recommendation Description

Widen from 6 to 8 lanes on I-75 throughout the county.  
 Construction is underway between mile posts 90 and 99, widening from 4 to 6 lanes.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	15.7	2 lanes	\$2,763,936	\$43,393,795
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,559,200	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

Quantity	Length (ft)	Width (ft)	Area	Unit Cost	Total
12	300	24	86,400	\$60	\$5,184,000

**Signals**  
 none

**ITS**

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	15.7	30	2,486,880	57.09	\$30,000	\$1,712,727
Improvements Taken						\$600,000
Relocation						\$100,000
Damages						\$600,000
Subtotal						\$3,012,727
<u>Net Cost</u>						\$3,012,727
<u>Scheduling Contingency</u>						\$1,657,000
<u>Admn/Court Cost</u>						\$2,801,836
<u>Inflation Factor</u>						\$2,988,625
<u>Right of Way Total</u>						<b>\$10,460,189</b>

**Summary**

Highway	\$43,393,795	
Bridges	\$5,184,000	
Signals		
ITS		
Construction Subtotal	\$48,577,795	
CEI	\$4,857,780	10% of construction subtotal
Construction Estimate	\$53,435,575	construction subtotal plus CEI
Preliminary Engineering	\$4,857,780	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$10,460,189	
Utility Relocation	\$971,556	2% of construction subtotal
Total	\$69,725,099	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, has 29 percent trucks, and therefore, is a freight focused corridor. This roadway segment is classified as a rural interstate. The 3 year accident rate from 1995-1997 for this segment is 27 as compared to the statewide average of 49 for rural interstates. The current AADT is 38,200 and the current volume to capacity ratio ranges between .42 and .47 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 61,403 and a volume to capacity ratio ranging between .70 and .79 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS C and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at LOS D without the project and a LOS C with the project in place. Implementation of this project will improve the LOS.				County		Dooly	
				Map Code		133	
				Route #		I-75	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Flint	
				Length		14.9 miles	
				Mileposts			
From: S. Dooly Co Line (MP 105)		To: N. Dooly Co Line (MP 123.6)					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	38,200	61,400	1995-1997 3 year Accident Rate	27 rural interstate			
Truck %:	29%	29%	% Increase in Travel Speed	0%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-75 from six to eight lanes within the Dooly County limits.							

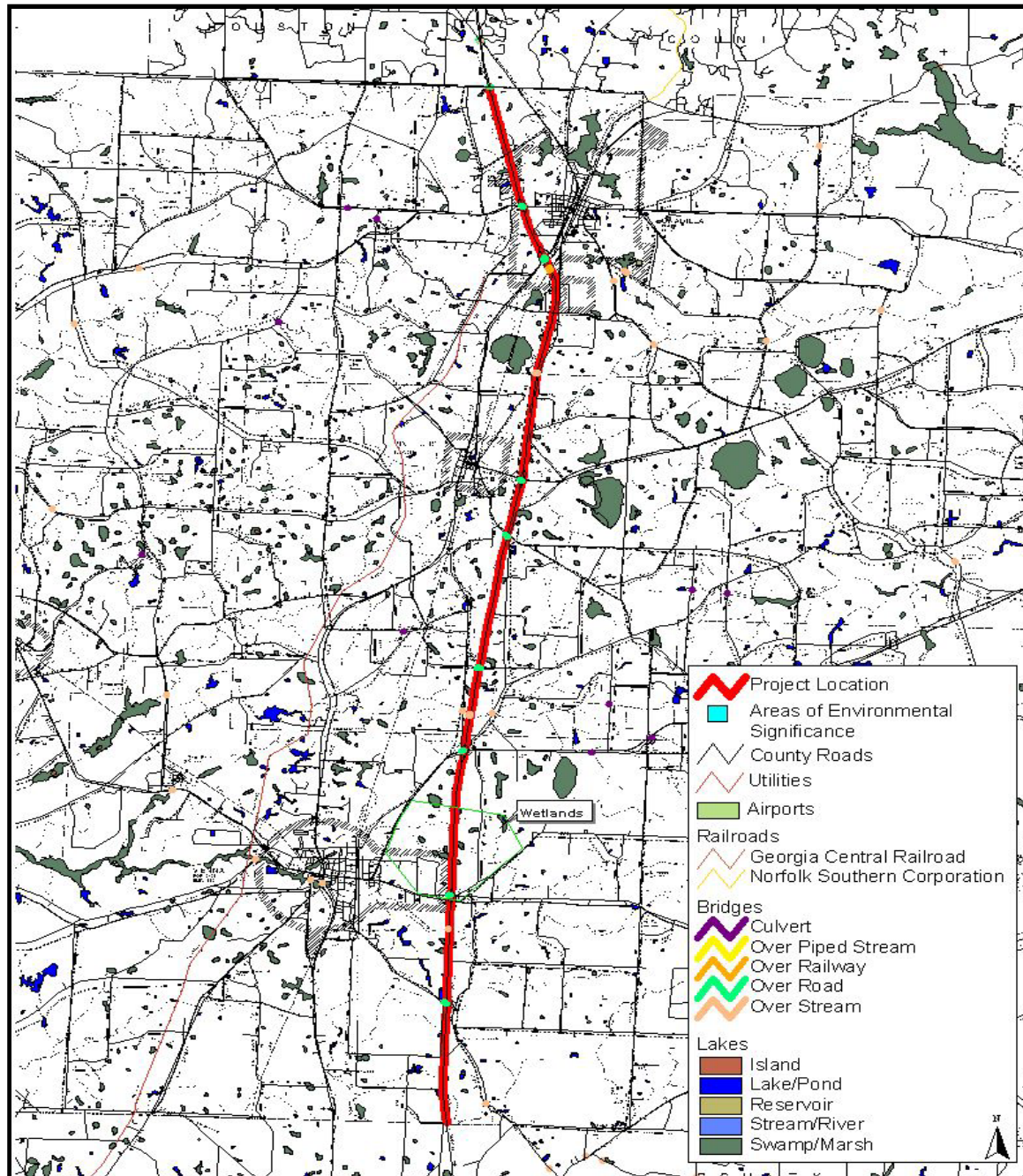




# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP, or NHS	\$4,521,000
Right-of-Way		\$5,644,000
Utilities	Locals	\$904,000
Construction	IM, STP, or NHS	\$49,733,000
<b>Project Cost</b>		<b>\$60,802,000</b>

## Location and Environmental Resource Map





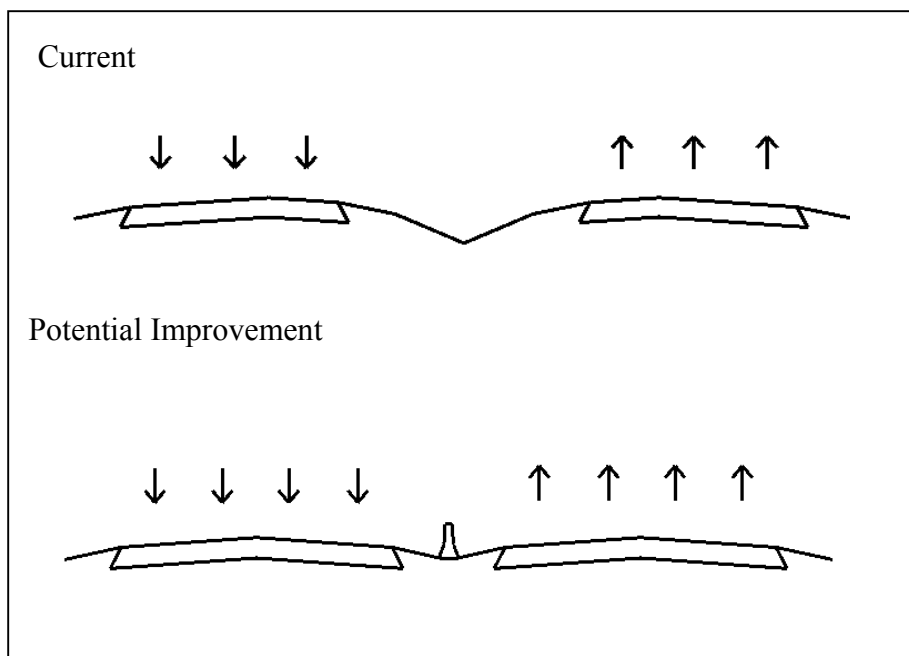
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



I-75 in Dooly County

Typical Section\*



\*Typical sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lanes 12' lanes	8 lanes 12' foot lanes
Shoulder	10' outside, 10' inside	12' outside, 10' inside
Speed Design	70 mph	70 mph
Pavement	PCC- roadway Asphalt- shoulders	PCC – roadway & shoulders
Signing and Marking	Excellent	
ITS Opportunities	None	None
Bridges	14	
Access Control	Controlled	Controlled



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	N/A
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	One wetland north of 230
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Dooly  
**Map Code** 133  
**Route** I-75  
**Location Description** I-75 from SR 230 to South of US 41  
**Prepared By** David Low  
**Date Last Updated** 12/15/02

### Recommendation Description

Widen from 6 to 8 lanes from S Dooly County line to N Dooly County line.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	14.9	2 lanes	\$2,763,720	\$41,179,428
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,559,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

Quantity	Length (ft)	Width (ft)	Area	Unit Cost	Total
14	200	24	67,200	\$60	\$4,032,000

### Signals

none

### ITS

none

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	14.9	30	2,360,160	54.18	\$30,000	\$1,625,455
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$1,625,455
<u>Net Cost</u>						\$1,625,455
<u>Scheduling Contingency</u>						\$894,000
<u>Admn/Court Cost</u>						\$1,511,673
<u>Inflation Factor</u>						<u>\$1,612,451</u>
<u>Right of Way Total</u>						<u>\$5,643,578</u>

**Summary**

Highway	\$41,179,428	
Bridges	\$4,032,000	
Signals		
ITS		
Construction Subtotal	\$45,211,428	
CEI	\$4,521,143	10% of construction subtotal
Construction Estimate	\$49,732,571	construction subtotal plus CEI
Preliminary Engineering	\$4,521,143	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$5,643,578	
Utility Relocation	\$904,229	2% of construction subtotal
Total	\$60,801,520	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, has 14 percent trucks, and therefore, is a freight focused corridor. This roadway segment is classified as a rural interstate. The 3 year accident rate from 1995-1997 is 36 as compared to the statewide average of 49 for rural interstates. The current AADT is 22,300 and the current volume to capacity ratio is .79. With no improvement, the corridor is anticipated to have an AADT of 38,674 and a volume to capacity ratio of 1.32 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at LOS A with the project in place. In 2025, the corridor will operate at a LOS C without the project and a LOS B with the project in place. Implementation of this project will improve the LOS.				County	Effingham	
				Map Code	134	
				Route #	I-16	
				GDOT District	5	
				Cong. District	12	
				RDC	Coastal Georgia	
				Length	2.9 miles	
				Mileposts		
From: W. Effingham Co. line		To: E. Effingham Co. line				
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes
Traffic Vol.:	22,300	38,700	1995-1997 3 year Accident Rate	36 rural interstate		
Truck %:	14%	14%	% Increase in Travel Speed	0%	% Increase in Capacity	50%
No. of Lanes	4	6	% Shift in Non-Freight	0%		
<b>PROJECT DESCRIPTION:</b>  Widen I-16 from four to six lanes. Assume widening to the inside with guardrail as needed.						





## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP, or NHS	\$970,000
Right-of-Way		\$0
Utilities	Local	\$194,000
Construction	IM, STP, or NHS	\$10,672,000
<b>Project Cost</b>		<b>\$11,836,000</b>

### Location and Environmental Resource Map

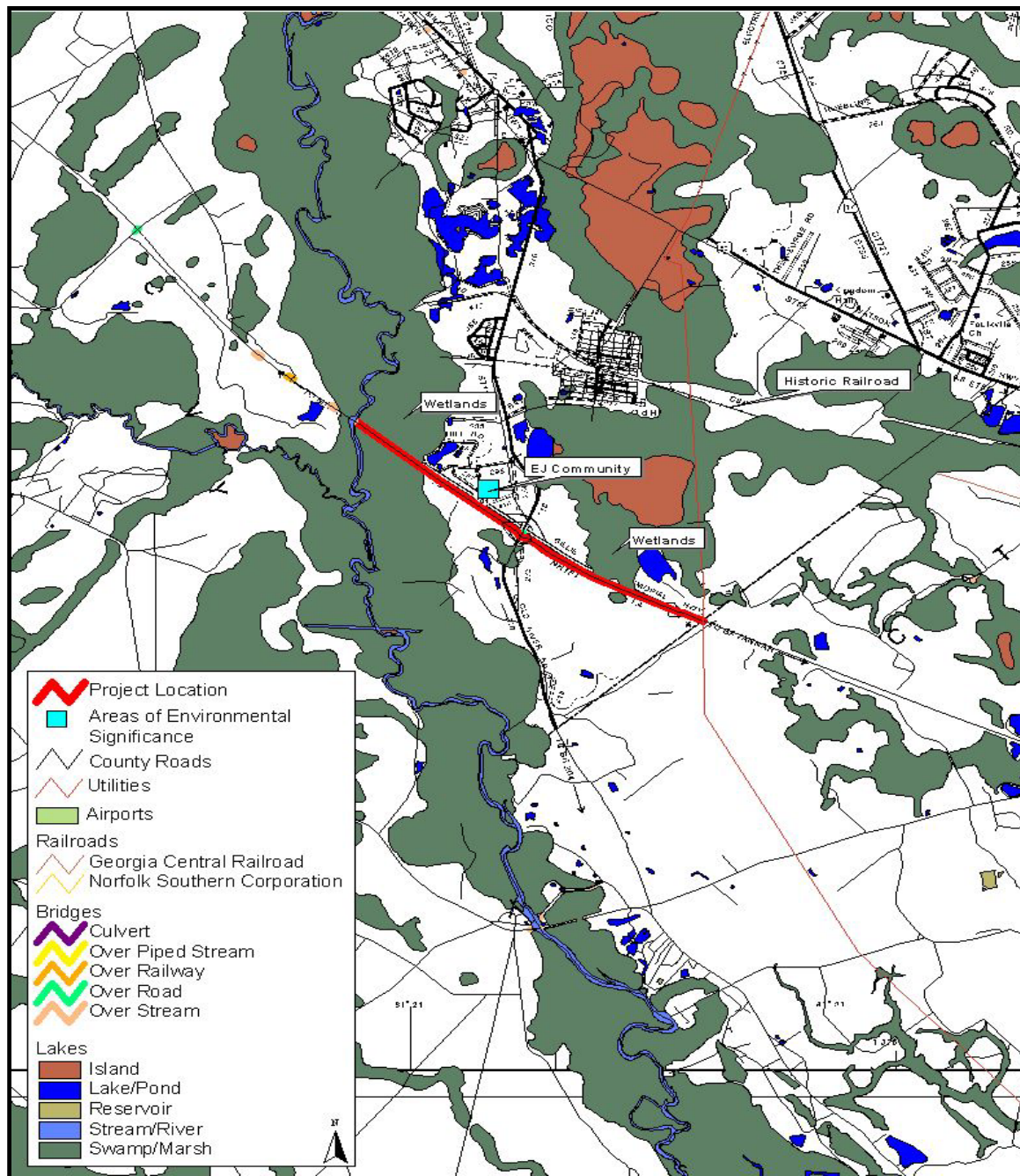


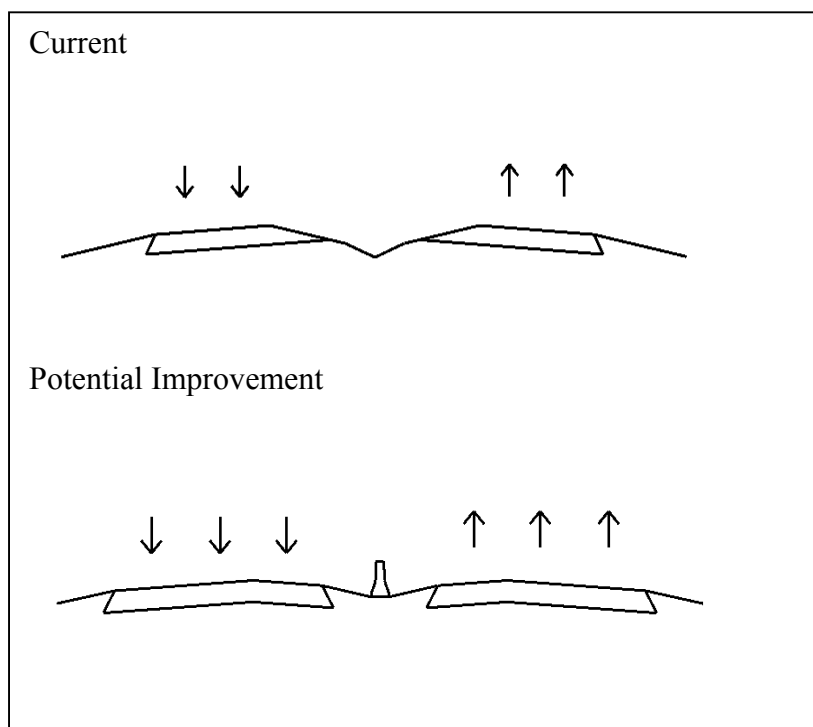


Photo of location



Looking west on I-16 just west of the Chatham/Effingham County line

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane freeway	6 lane freeway
Shoulder	4' inside asphalt, 12' outside asphalt	10' inside, 12' outside
Speed Design	70 mph	70 mph
Pavement	PCC through lanes, asphalt shoulders	PCC all
Signals	None	None
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	Wetland	Same
Right of Way		No additional right of way



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One historic railroad
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	One community
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Ogeechee river and various wetlands
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	Yes
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Effingham
<b>Map Code</b>	134
<b>Route</b>	I-16
<b>Location Description</b>	I-16 from W Effingham Co line to E Effingham Co line
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/15/02

### Recommendation Description

Widen I-16 from 4 to 6 lanes. Assume widening to the inside with guardrail as needed.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Part 1 - widening</u>	2.9	2 lanes	\$2,650,212	\$7,685,615
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,453,900	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
wetland	800	42	33,600	\$60	\$2,016,000

### Signals

none

### ITS

none

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
no additional right of way						
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Net Cost</u>						
<u>Scheduling Contingency</u>						
<u>Admn/Court Cost</u>						
<u>Inflation Factor</u>						
<u>Right of Way Total</u>						

**Summary**

Highway	\$7,685,615	
Bridges	\$2,016,000	
Signals	0	
ITS		
Construction Subtotal	\$9,701,615	
CEI	\$970,161	10% of construction subtotal
Construction Estimate	\$10,671,776	construction subtotal plus CEI
Preliminary Engineering	\$970,161	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$0	
Utility Relocation	\$194,032	2% of construction subtotal
Total	\$11,835,970	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, has 18 percent trucks, and therefore, is a freight focused corridor. This segment of roadway is classified as both a rural and an urban interstate. The 3 year accident rate from 1995-1997 for the rural portion is 22 as compared to the statewide average of 49 for rural interstates. The 3 year accident rate for the urban section is 34 as compared to the statewide average of 174 for urban interstates. The current AADT is 26,700 and the current volume to capacity ratio ranges between .69 and .98 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 46,652 and a volume to capacity ratio ranging between .25 and 1.15 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS C without the project and a LOS B with the project in place. Implementation of this project will improve the LOS.				County		Glynn	
				Map Code		138	
				Route #		I-95	
				GDOT District		5	
				Cong. District		1	
				RDC		Coastal Georgia	
				Length		15.1 miles	
				Mileposts			
				From: US 82 /US 17		To: US 25	
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	26,700	46,700	1995-1997 3 year Accident Rate	22 rural interstate 34 urban interstate			
Truck %:	18%	18%	% Increase in Travel Speed	0%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-95 from US 82/17 to US 25 four to six lanes, with outside widening to maintain the separation between opposing directions of travel. Improvements will also include a Smoke/Fire Detection System and warning signs for the marsh areas containing peat bogs.							





# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP, or NHS	\$5,635,000
Right-of-Way	IM, STP, or NHS	\$4,575,000
Utilities	Local	\$1,127,000
Construction	IM, STP, or NHS	\$61,980,000
<b>Project Cost</b>		<b>\$73,317,000</b>

## Location and Environmental Resource Map

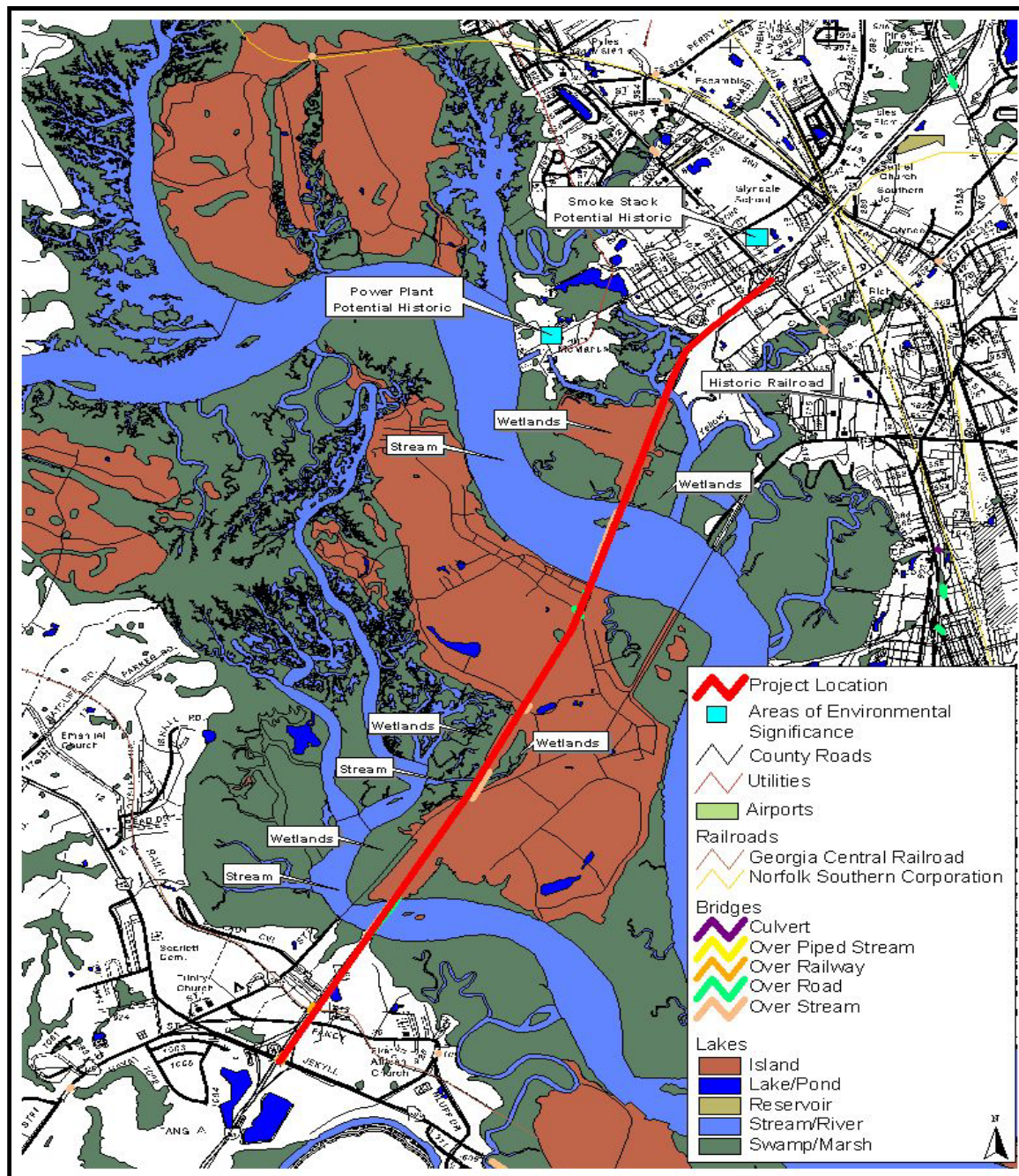


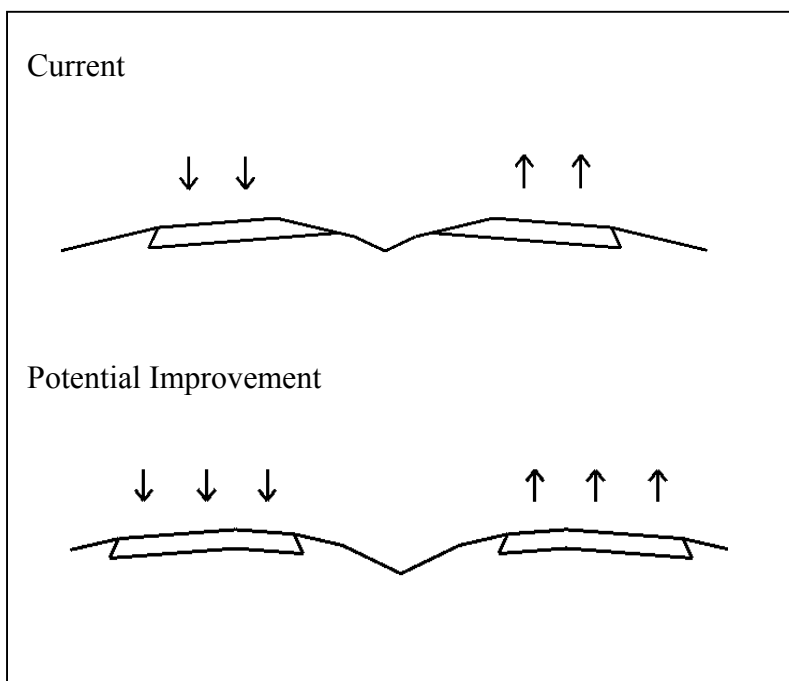


Photo of location



Looking south on I-95 south of the Turtle River

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane freeway	6 lane freeway
Shoulder	4' inside, 12' outside	10' inside, 12' outside
Speed Design	70 mph	Same
Pavement	Asphalt	Same
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities		Marshes have peat bogs which can catch fire. Smoke/fire detection and warning system
Bridges	Gibson Creek, Turtle River, marsh, South Brunswick River, railroad	Same
Railroads	Bridges over RR just north of US 82 interchange	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two historic railroads, two potential historic resources(historic power plant and historic smoke stack)
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Several streams and associated wetlands
Wildlife Refuge	N/A
Endangered Species	Potential foraging and nesting habitat for Bald eagle and Wood stork
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Glynn
<b>Map Code</b>	138
<b>Route</b>	I-95
<b>Location Description</b>	I-95 from US 82/17 to US 25
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/15/02

### Recommendation Description

Widen from 4 to 6 lanes with outside widening to maintain the separation between opposing directions of travel.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
	15.1		\$2,774,520	\$41,895,252
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,569,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Gibson Creek	1200	42	50,400	\$60	\$3,024,000
Turtle River	2000	42	84,000	\$60	\$5,040,000
marsh	800	42	33,600	\$60	\$2,016,000
South Brunswick River	1500	42	63,000	\$60	\$3,780,000
Railroad	200	42	8,400	\$60	<u>\$504,000</u>
Subtotal					\$14,364,000

### Signals

none

### ITS

Component	# Units	Unit Cost	Totals
Fog Detection System	2	\$12,000	\$24,000
Highway Advisory Radio	2	\$26,000	\$52,000
Dynamic Fog Warning Sigr	2	\$5,000	<u>\$10,000</u>
Subtotal			\$86,000

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	15.1	24	1,913,472	43.93	\$30,000	\$1,317,818
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$1,317,818
<u>Net Cost</u>						\$1,317,818
<u>Scheduling Contingency</u>						\$724,800
<u>Admn/Court Cost</u>						\$1,225,571
<u>Inflation Factor</u>						<u>\$1,307,276</u>
<u>Right of Way Total</u>						<b>\$4,575,465</b>

**Summary**

Highway	\$41,895,252	
Bridges	\$14,364,000	
Signals	0	
ITS	<u>\$86,000</u>	
Construction Subtotal	\$56,345,252	
CEI	\$5,634,525	10% of construction subtotal
Construction Estimate	\$61,979,777	construction subtotal plus CEI
Preliminary Engineering	\$5,634,525	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$4,575,465	
Utility Relocation	\$1,126,905	2% of construction subtotal
Total	\$73,316,672	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as a rural and an urban interstate. The 3 year accident rate from 1995-1997 for the rural interstate portion is 49, which is the same as the statewide average for rural interstates. The 3 year accident rate for the urban section is 52 as compared to the statewide average of 174 for urban interstates. The current AADT is 21,200 and the current volume to capacity ratio is .42. With no improvement, the corridor is anticipated to have an AADT of 36,779 and a volume to capacity ratio of .70 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS A with the project in place. In 2025, the corridor will operate at a LOS C without the project and a LOS of B with the project in place. Implementation of this project will improve the LOS.				County		Harris	
				Map Code		143	
				Route #		I-185	
				GDOT District		3	
				Cong. District		8	
				RDC		Lower Chattahoochee	
				Length		3 miles	
				Mileposts			
From: S Harris Co Line		To: MP 19 in Harris County					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	21,200	36,800	1995-1997 3 year Accident Rate	49 rural interstate 52 urban interstate			
Truck %:	6%	6%	% Increase in Travel Speed	0%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-185 from four to six-lanes to the inside.							





## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	State/Federal	\$1,929,000
Right-of-Way		\$0
Utilities	Local	\$386,000
Construction	State/Federal	\$21,218,000
<b>Project Cost</b>		<b>\$23,533,000</b>

Location and Environmental Resource Map

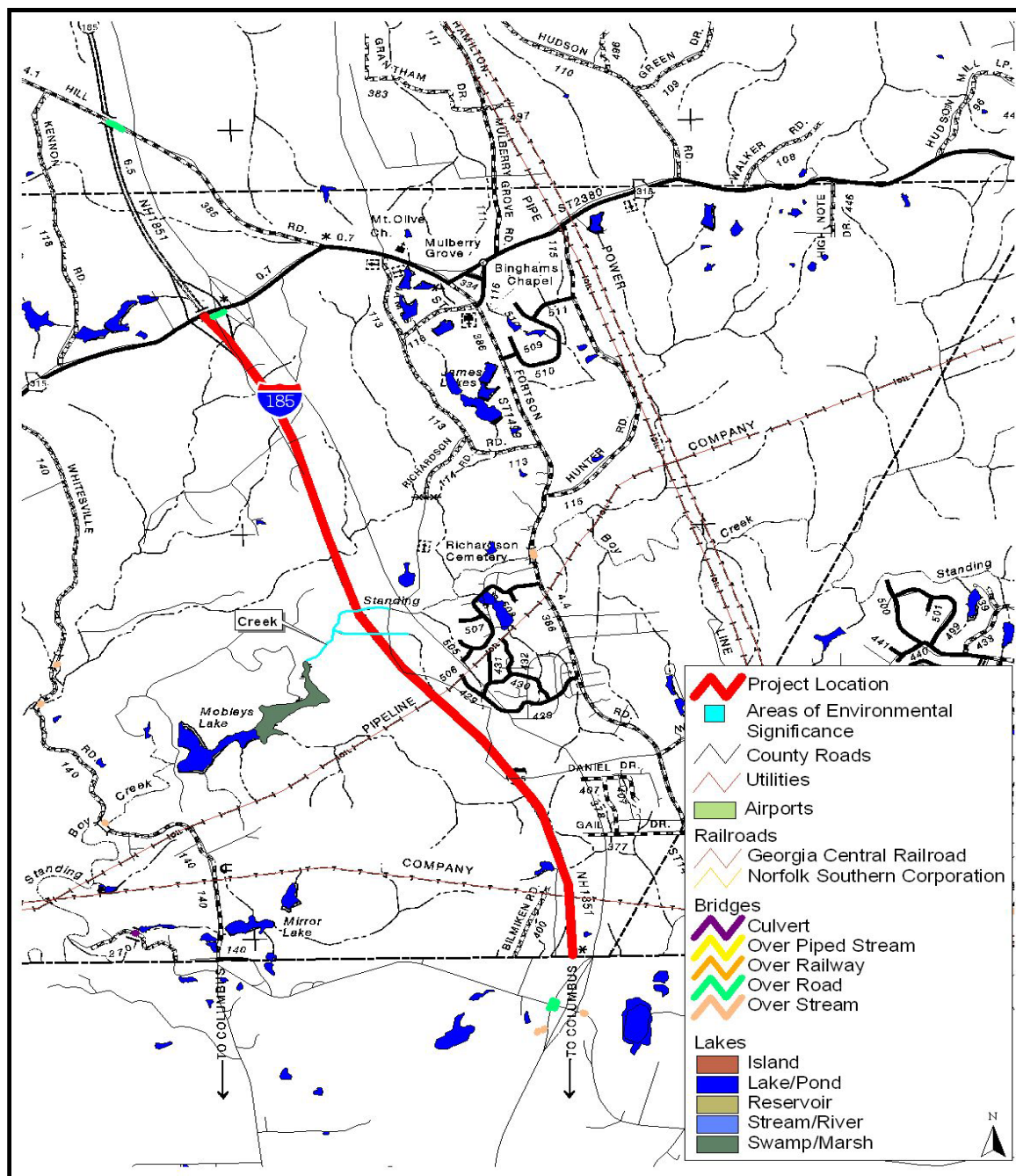


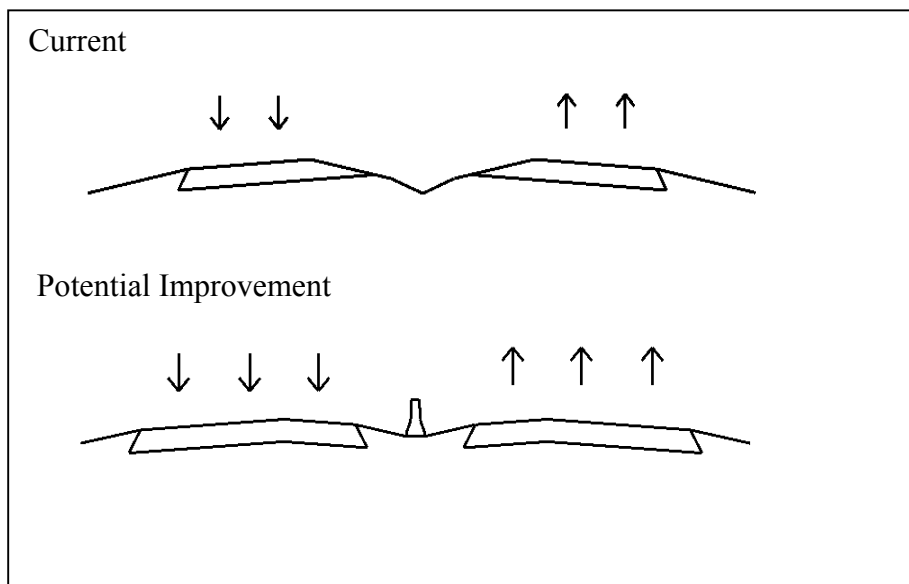


Photo of location



I-185 in Harris County

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane expressway 44' depressed grass median	6 lane freeway
Shoulder	10' outside, 2' inside	10' shoulders
Speed Design	70 mph & 65 to 55 mph	70 mph
Observed Safety Concerns	Clear zone- pine trees	
Pavement	Asphalt	PCC
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	Call boxes	No new ITS
Access Control	Controlled	Controlled



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	N/A
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	Standing Boy Creek south of Mile Post 17
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Harris  
**Map Code** 143  
**Route** I-185  
**Location Description** I-185 from 4.5 mi north of US 80 to SR 315  
**Prepared By** David Low  
**Date Last Updated** 01/14/03

### Recommendation Description

Widen from 4 to 6 lanes from the end of the existing 6 lane section at MP 12 in Muscogee Co north of US 80 to SR 315 (MP 19). The six lane section on I-185 begins just north of US 80/SR 22 near milepost 12.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	7.0	2 lanes	\$2,650,212	\$18,551,484
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,453,900	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
over Standing Boy Creek	300	41	12,300	\$60	\$738,000

### Signals

none

### ITS

CCTV

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land		20	0	0.00	\$10,000	\$0
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$0
<u>Net Cost</u>						\$0
<u>Scheduling Contingency</u>						\$0
<u>Admn/Court Cost</u>						\$0
<u>Inflation Factor</u>						\$0
<u>Right of Way Total</u>						\$0

**Summary**

Highway	\$18,551,484	
Bridges	\$738,000	
Signals		
ITS		
Construction Subtotal	\$19,289,484	
CEI	\$1,928,948	10% of construction subtotal
Construction Estimate	\$21,218,432	construction subtotal plus CEI
Preliminary Engineering	\$1,928,948	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$0	
Utility Relocation	\$385,790	2% of construction subtotal
Total	\$23,533,170	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

### NEED AND PURPOSE:

The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, has 14-20 percent trucks, and therefore, is a freight focused corridor. This roadway segment is classified as a rural and an urban interstate. The 3 year accident rate from 1995-1997 for the rural interstate portion is 30 as compared to the statewide average of 49. The 3 year accident rate for the portion classified as an urban interstate is 52 as compared to the statewide average of 174. The current AADT is 43,400 and the current volume to capacity ratio ranging between .48 and .56 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 79,032 and a volume to capacity ratio ranging from .80 to .93 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS B with the project in place. In 2025 the corridor will operate at a LOS D without the project and a LOS of C with the project in place. Implementation of the project will improve the LOS.

<b>NEED AND PURPOSE:</b> The purpose of the project is to reduce congestion and create a safer environment for freight movement. The described location is on STRAHNET, has 14-20 percent trucks, and therefore, is a freight focused corridor. This roadway segment is classified as a rural and an urban interstate. The 3 year accident rate from 1995-1997 for the rural interstate portion is 30 as compared to the statewide average of 49. The 3 year accident rate for the portion classified as an urban interstate is 52 as compared to the statewide average of 174. The current AADT is 43,400 and the current volume to capacity ratio ranging between .48 and .56 throughout the corridor. With no improvement, the corridor is anticipated to have an AADT of 79,032 and a volume to capacity ratio ranging from .80 to .93 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at a LOS B with the project in place. In 2025 the corridor will operate at a LOS D without the project and a LOS of C with the project in place. Implementation of the project will improve the LOS.				County		Houston	
				Map Code		145	
				Route #		I-75	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Georgia	
				Length		16.9 miles	
				Mileposts			
				From: S. Houston Co. Line		To: N. Houston Co. Line	
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	43,400	79,000	1995-1997 3 year Accident Rate	30 rural interstate 52 urban interstate			
Truck %:	20%	20%	% Increase in Travel Speed	0%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			

### PROJECT DESCRIPTION:

Widen I-75 from six to eight lanes through Houston County.

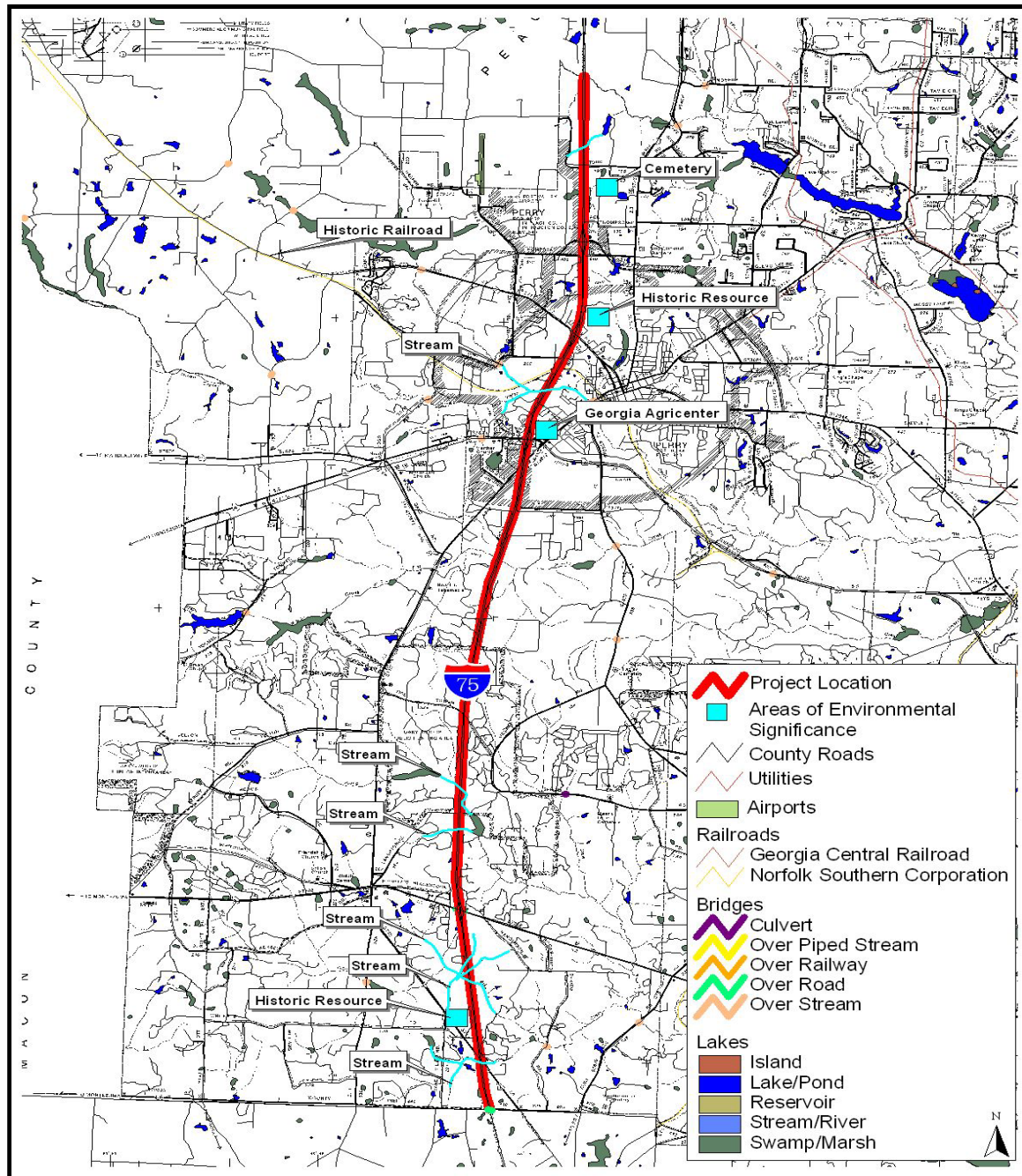




# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP, or NHS	\$5,031,000
Right-of-Way	IM, STP, or NHS	\$1,404,000
Utilities	Local	\$1,006,000
Construction	IM, STP, or NHS	\$55,342,000
<b>Project Cost</b>		<b>\$62,783,000</b>

## Location and Environmental Resource Map





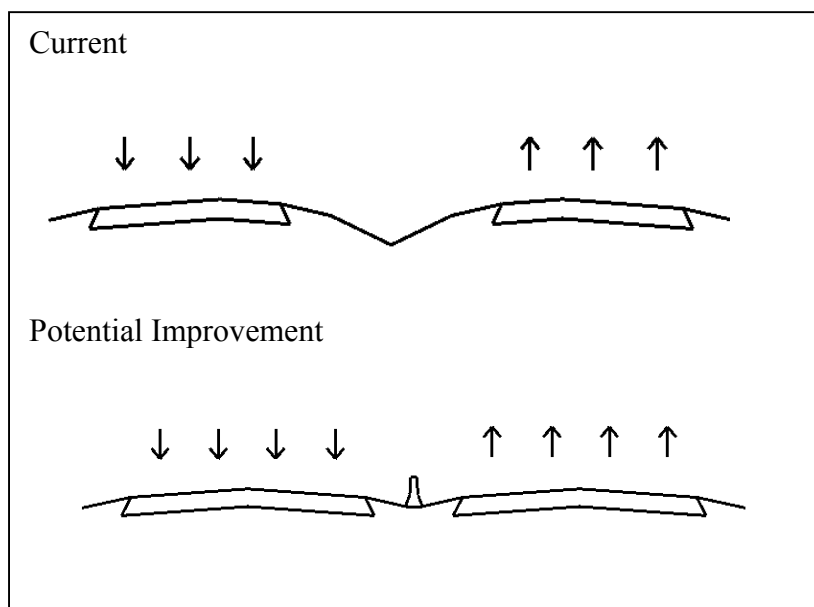
## Central Georgia HPC 6 Corridor Management Plan

Photo of location



I-75 in Houston County

Typical Section\*



\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane freeway	8 lane freeway
Shoulder	10-12' outside, 10' inside	Same
Speed Design	70 mph	70 mph
Pavement	Asphalt from mile post 123 to 127, PCC from post 127 to 140 w/ asphalt shoulders	Portland Cement Concrete
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	None
Bridges	US 41, Big Creek, Trib to Elko Creek, Flat Creek, Big Indian Creek, RR, US 341, Mossy Creek	
Access Control	Controlled	Controlled
Observed Existing Utilities	Interchange lighting	



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Two potential historic resources and one historic railroad
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	One cemetery south of Thompson road, Georgia Agricenter
Parks and Recreation	N/A
Wetlands and Streams	Various stream crossings
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Houston  
**Map Code** 145  
**Route** I-75  
**Location Description** I-75 from S Houston County line to N Houston County line  
**Prepared By** David Low  
**Date Last Updated** 12/15/02

**Recommendation Description**  
 Widen from 6 to 8 lanes.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	16.9	2 lanes	\$2,763,936	\$46,710,518
Source of Unit Cost	FDOT 2000 Transportation Costs		\$2,559,200	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
over US 41	400	24	9,600	\$60	\$576,000
over Big Creek	400	24	9,600	\$60	\$576,000
over tributary to Elko Creek	300	24	7,200	\$60	\$432,000
over Flat Creek	300	24	7,200	\$60	\$432,000
over Big Indian Creek	300	24	7,200	\$60	\$432,000
over railroad	200	24	4,800	\$60	\$288,000
over US 341	300	24	7,200	\$60	\$432,000
over Mossy Creek	300	24	7,200	\$60	<u>\$432,000</u>
Subtotal					\$3,600,000

**Signals**  
 none

**ITS**  
 none

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	13.9	24	1,761,408	40.44	\$10,000	\$404,364
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$404,364
<u>Net Cost</u>						\$404,364
<u>Scheduling Contingency</u>						\$222,400
<u>Admn/Court Cost</u>						\$376,058
<u>Inflation Factor</u>						<u>\$401,129</u>
<u>Right of Way Total</u>						<b>\$1,403,951</b>

**Summary**

Highway	\$46,710,518	
Bridges	\$3,600,000	
Signals		
ITS		
Construction Subtotal	\$50,310,518	
CEI	\$5,031,052	10% of construction subtotal
Construction Estimate	\$55,341,570	construction subtotal plus CEI
Preliminary Engineering	\$5,031,052	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$1,403,951	
Utility Relocation	\$1,006,210	2% of construction subtotal
Total	\$62,782,783	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. Traffic congestion exists on I-185 within the Columbus area. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as an urban interstate. The 3 year accident rate from 1995-1997 for this roadway segment is 274 as compared to the statewide average of 174 for urban interstates. The current AADT on I-185 is 60,500 and the current volume to capacity ratio is .65-.83. With no improvement, the corridor is anticipated to have an AADT of 97,862 and a volume to capacity ratio of 1.08-1.38 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS D and would have operated at a LOS B with the project in place. In 2025, the corridor will operate at a LOS F without the project and a LOS of C with the project in place. Implementation of this project will improve the LOS.				County		Muscogee	
				Map Code		168	
				Route #		I-185	
				GDOT District		3	
				Cong. District		2, 8 & 11	
				RDC		Lower Chattahoochee	
				Length		7.2 miles	
				Mileposts			
From: US 27		To: US 280					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	60,500	97,900	1995-1997 3 year Accident Rate	274 urban interstate			
Truck %:	6%	6%	% Increase in Travel Speed	0%	% Increase in Capacity	33%	
No. of Lanes	Varies 4 to 6	Varies 6 to 8	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b> Widen I-185 from six to eight lanes from US 27 to St. Mary's Road, and widen inside shoulder from 6 to 10 feet. Widen from four to six lanes from St. Mary's Road to US 280. The constraints in widening I-185 could prove too great for selection of this solution.  An alternate recommendation is a new location four lane freeway three to five miles east of and parallel to I-185 from US 80 on the north end to US 280 on the south end. This needs to be addressed by the Columbus metropolitan travel demand model.  In order to relieve congestion along I-185, ITS is recommended along the interstate corridor. The system includes Closed Circuit Television (CCTV) monitoring, communication links to proposed Columbus Regional Transportation Control Center (TCC) and Dynamic Message Signs (DMS). The system will be linked to the Columbus TCC to monitor traffic flow and provide traveler information to both automobile and truck traffic on major routes entering city. This advance information can facilitate the re-routing of traffic thereby reducing congestion on I-185. The Columbus TCC is scheduled for construction in FY03.  Incremental costs for this project can be shared with existing plans for Columbus Signal System and Communications upgrade and Changeable Message Sign deployment plans as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019"  Other possible funding vehicles would be to share incremental costs with projects in the current Columbus-Phenix City TIP. The ITS Technologies contained in this project description could be a subset of these TIP projects. The projects are 1) the future ATMS/GDOT Regional TCC (ITS Center for TCC) in Columbus; and 2) The ITS components of the TCC. Funding for construction of the TCC in FY03 is \$1,100,000 from Federal and State sources. Funding for the ATMS components in FY03 is \$1,997,000 (\$1,598,000 from Federal sources and \$399,000 from State sources).							

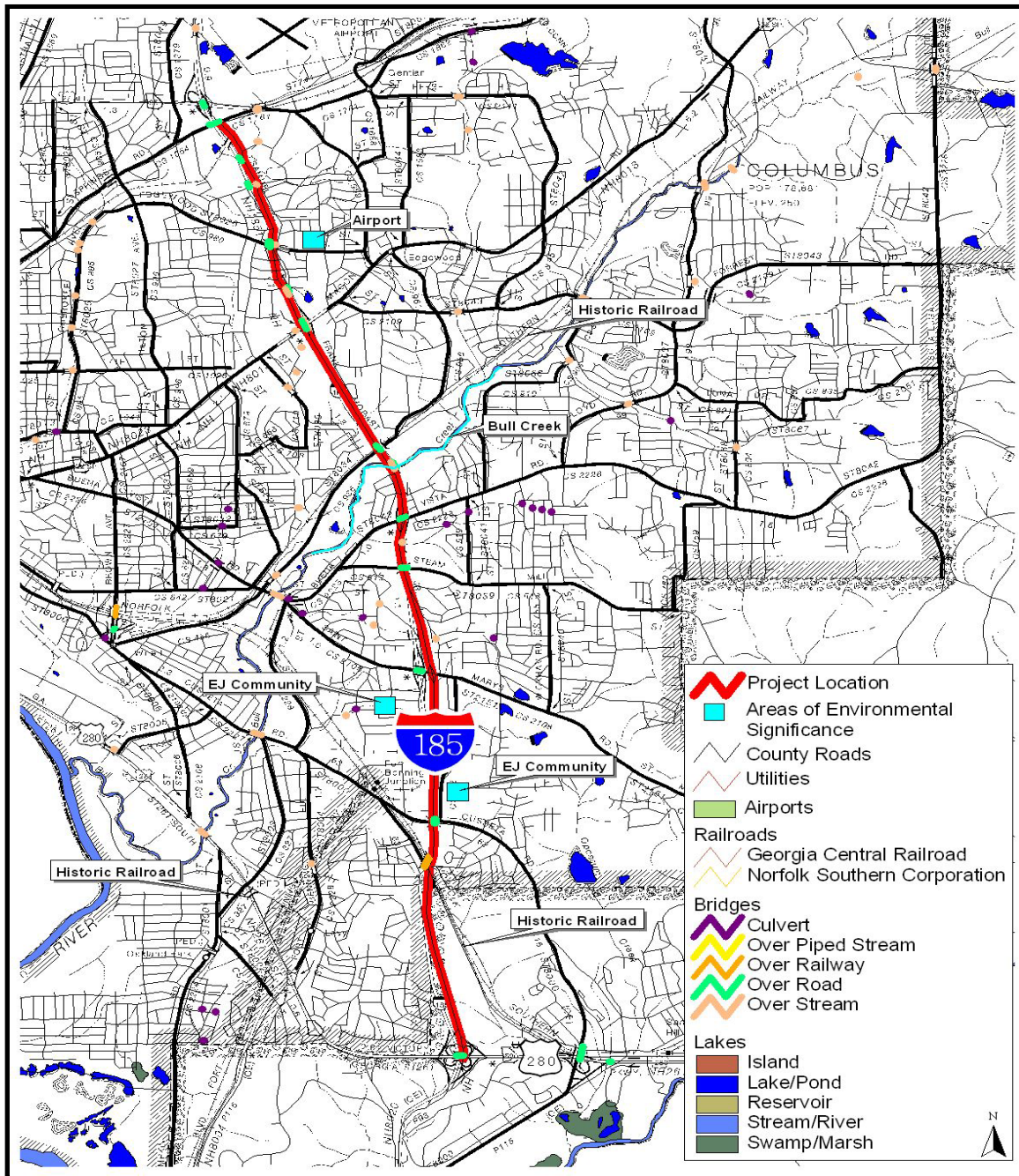




# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, NHS, STP	\$6,987,000
Right-of-Way	IM, NHS, STP	\$124,992,000
Utilities	Local	\$6,987,000
Construction	IM, NHS, STP	\$76,852,000
<b>Project Cost</b>		<b>\$215,817,000</b>

## Location and Environmental Resource Map





## Central Georgia HPC 6 Corridor Management Plan

Photo of location



**I-185 in Muscogee County**



# Central Georgia HPC 6 Corridor Management Plan

## ITS Map of Location



Note for map code 168: All DMS are adjacent to I-185.

### LEGEND

- Project Location
- ▲ - CCTV (Closed Circuit Television) - Proposed
- ▲ - Dynamic Fog Detection System - Proposed
- DMS (Dynamic Message Sign) - Already Installed
- DMS (Dynamic Message Sign) - Proposed
- HAR (Highway Advisory Radio) - Proposed
- Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing		Proposed	
Location	From US 27 south to St. Mary's Road	From St. Mary's Road south to US 280	From US 27 south to St. Mary's Road	From St. Mary's Rd south to US 280
Typical Section	3 12' lanes, median	2 12'lanes 44' grass	8 lanes	6 lanes
Shoulder	10' outside, 4-6'inside	10' outside, 2' inside	10' inside, 12' outside	Same
Speed Design	70 mph	60 mph	Same	
Observed Substandard Design Features	Substandard inside shoulders for six lane section; relatively sharp horizontal curve just south of Old Cusseta Road			
Pavement	Portland Cement Concrete roadway through lanes, asphalt shoulders		Portland Cement Concrete roadway and shoulders	
Signing and Marking	Per GDOT Standards		Per GDOT Standards	
ITS Opportunities	None		CCTV, DMS	
Bridges	RR, Old Cusseta Rd, creek, Bull Creek, RR & road, SR22 Spur/Macon Rd, Lindsey Creek, Edgewood Rd, US 27 Alt		Same	
Other Major Structures	Noise walls from US 27 to St Mary's Road			
Access Control	Controlled		Controlled	
Observed Existing Utilities	Transmission lines			
Railroads	4 Railroad crossings			



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	Four railroad crossings
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	Two communities
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	One airport
Parks and Recreation	N/A
Wetlands and Streams	Bull Creek
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

<b>County</b>	Muscogee
<b>Map Code</b>	168
<b>Route</b>	New Location
<b>Location Description</b>	New Location from US 27 to US 280 3 to 5 miles East of I-185
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/15/02

### Recommendation Description

New 4 lane freeway from US 80 to US 280.

The preferred recommendation is a new location freeway 3 to 5 miles east of and parallel to I-185 tying into US 80 on the north end and to US 280 on the south end.

This needs to be addressed by the Columbus metropolitan area travel demand model.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	11.0	4 lanes	\$4,102,704	\$45,129,744
Source of Unit Cost	FDOT 2000 Transportation Costs		\$3,798,800	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

Quantity	Length (ft)	Width (ft)	Area	Unit Cost	Total
24	400	36	345,600	\$60	\$20,736,000

### Signals

20				\$100,000	\$2,000,000
----	--	--	--	-----------	-------------

### ITS

\$2,000,000

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial			0	0.00	\$250,000	\$0
residential	11.0	300	17,424,000	400.00	\$55,000	<u>\$22,000,000</u>
Land Subtotal						\$22,000,000
Improvements Taken						\$2,000,000
Relocation						\$2,000,000
Damages						\$10,000,000
Subtotal						\$36,000,000
<u>Rural</u>						
Land			0	0.00	\$10,000	\$0
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$0
<u>Net Cost</u>						\$36,000,000
<u>Scheduling Contingency</u>						\$19,800,000
<u>Admn/Court Cost</u>						\$33,480,000
<u>Inflation Factor</u>						<u>\$35,712,000</u>
<u>Right of Way Total</u>						<b>\$124,992,000</b>

### Summary

Highway	\$45,129,744	
Bridges	\$20,736,000	
Signals	\$2,000,000	
ITS	<u>\$2,000,000</u>	
Construction Subtotal	\$69,865,744	
CEI	\$6,986,574	10% of construction subtotal
Construction Estimate	\$76,852,318	construction subtotal plus CEI
Preliminary Engineering	\$6,986,574	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$124,992,000	
Utility Relocation	\$6,986,574	10% of construction subtotal
Total	\$215,817,467	





## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

<b>NEED AND PURPOSE:</b> The purpose of the project is to reduce congestion and create a safer environment for freight movement. Traffic congestion exists on this thoroughfare route within the Columbus area. Freight flow is heavily impeded due to dense commercial and residential development. The described location is on STRAHNET and, therefore, is a freight focused corridor. This roadway segment is classified as an urban interstate. The 3 year accident rate from 1995-1997 for this segment is 131 as compared to the statewide average of 174 for urban interstates. The current AADT is 23,500 and the current volume to capacity ratio is .46. With no improvement, the corridor is anticipated to have an AADT of 40,373 and a volume to capacity ratio of .77 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS B and would have operated at LOS A with the project in place. In 2025, the corridor operated at LOS C without the project and a LOS of B with the project in place. Implementation of this project will improve the LOS.				County		Muscogee	
				Map Code		169	
				Route #		I-185	
				GDOT District		3	
				Cong. District		8	
				RDC		Lower Chattahoochee	
				Length		4.2 miles	
				Mileposts			
From: US 80		To: North Muscogee County line					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	23,500	40,400	1995-1997 3 year Accident Rate	131 urban interstate			
Truck %:	6%	6%	% Increase in Travel Speed	10%	% Increase in Capacity	50%	
No. of Lanes	4	6	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-185 from a four lane section to six lanes with standard inside and outside shoulders.  The system includes Closed Circuit Television (CCTV) monitoring, communication links to proposed Columbus Regional Transportation Control Center (TCC), Highway Advisory Radio (HAR) and a Dynamic Message Sign (DMS). The system will be linked to the Columbus TCC to monitor traffic flow and provide traveler information to both automobile and truck traffic on major routes entering city. This advance information can facilitate the re-routing prior to the I-185 interchange if warranted by current traffic conditions. The Columbus TCC is scheduled for construction in FY03.  Incremental costs for this project can be shared with existing plans for Columbus Signal System and Communications upgrade and Changeable Message Sign deployment plans as described in GDOT's "A Twenty Year Strategic Plan For Intelligent Transportation System Deployment in Georgia For 1999-2019"  Other possible funding vehicles would be to share incremental costs with projects in the current Columbus-Phenix City TIP. The ITS Technologies contained in this project description could be a subset of these TIP projects. The projects are 1) the future ATMS/GDOT Regional TCC (ITS Center for TCC) in Columbus; and 2) The ITS components of the TCC. Funding for construction of the TCC in FY03 is \$1,100,000 from Federal and State sources. Funding for the ATMS components in FY03 is \$1,997,000 (\$1,598,000 from Federal sources and \$399,000 from State sources).							





## Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$1,303,000
Right-of-Way	N/A	\$0
Utilities	Local	\$261,000
Construction	IM, STP or NHS	\$14,337,000
<b>Project Cost</b>		<b>\$15,901,000</b>

### Location and Environmental Resource Map

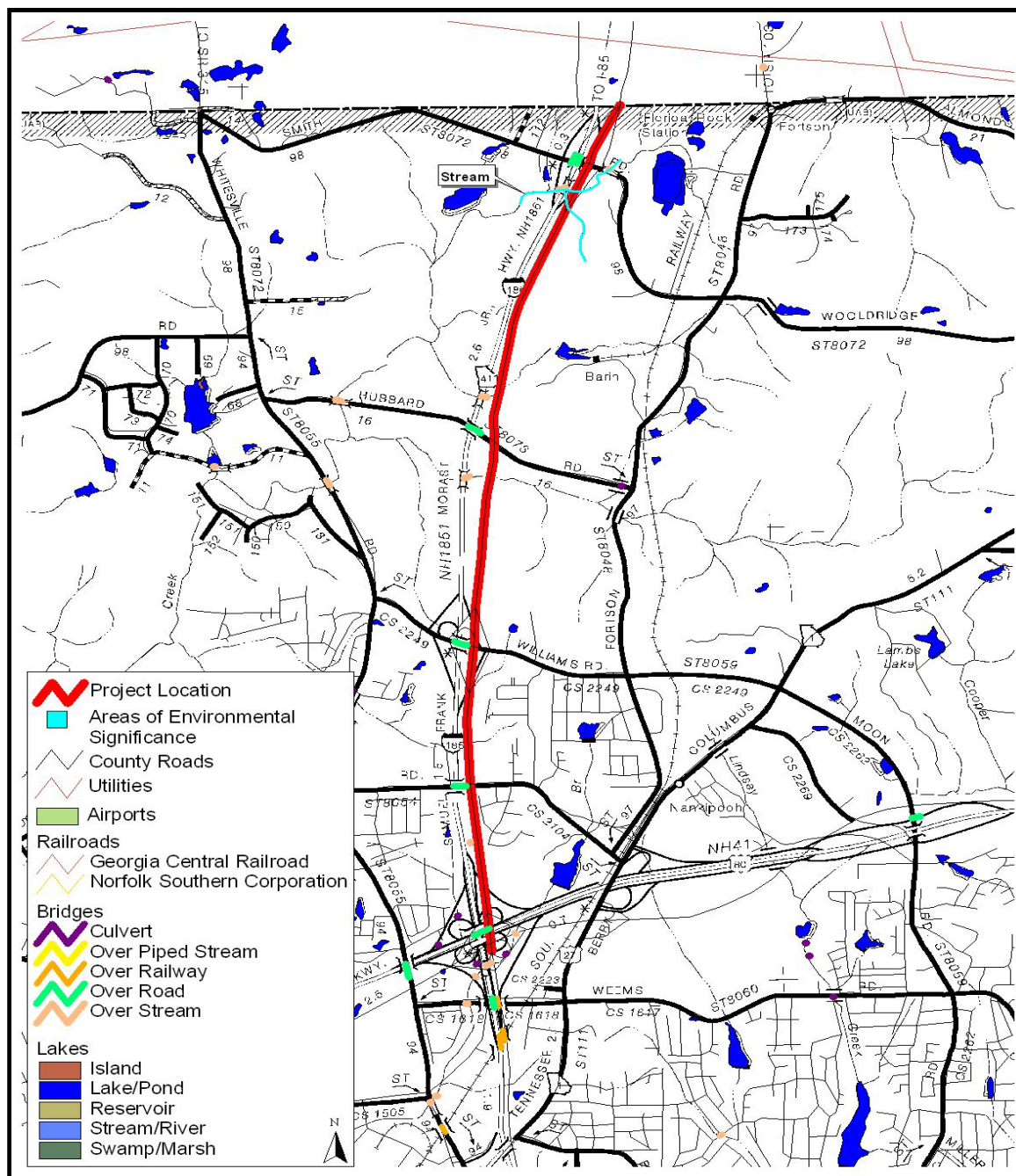


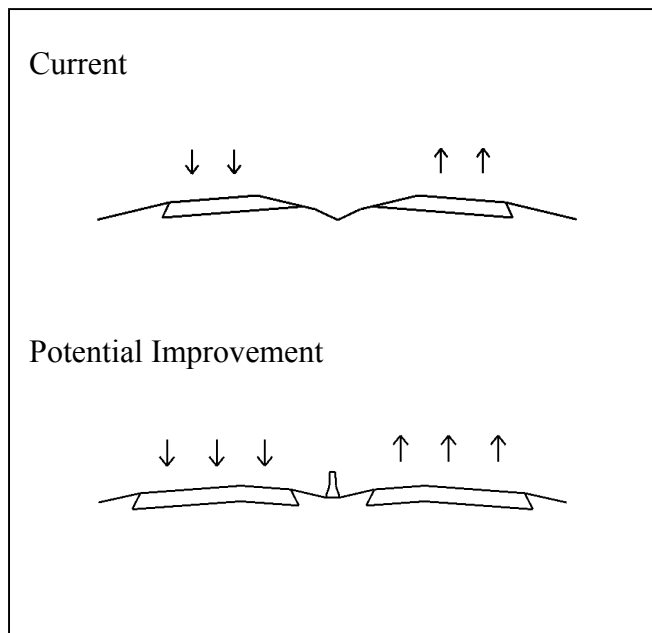


Photo of location



I-185 in Muscogee County

Typical Section\*

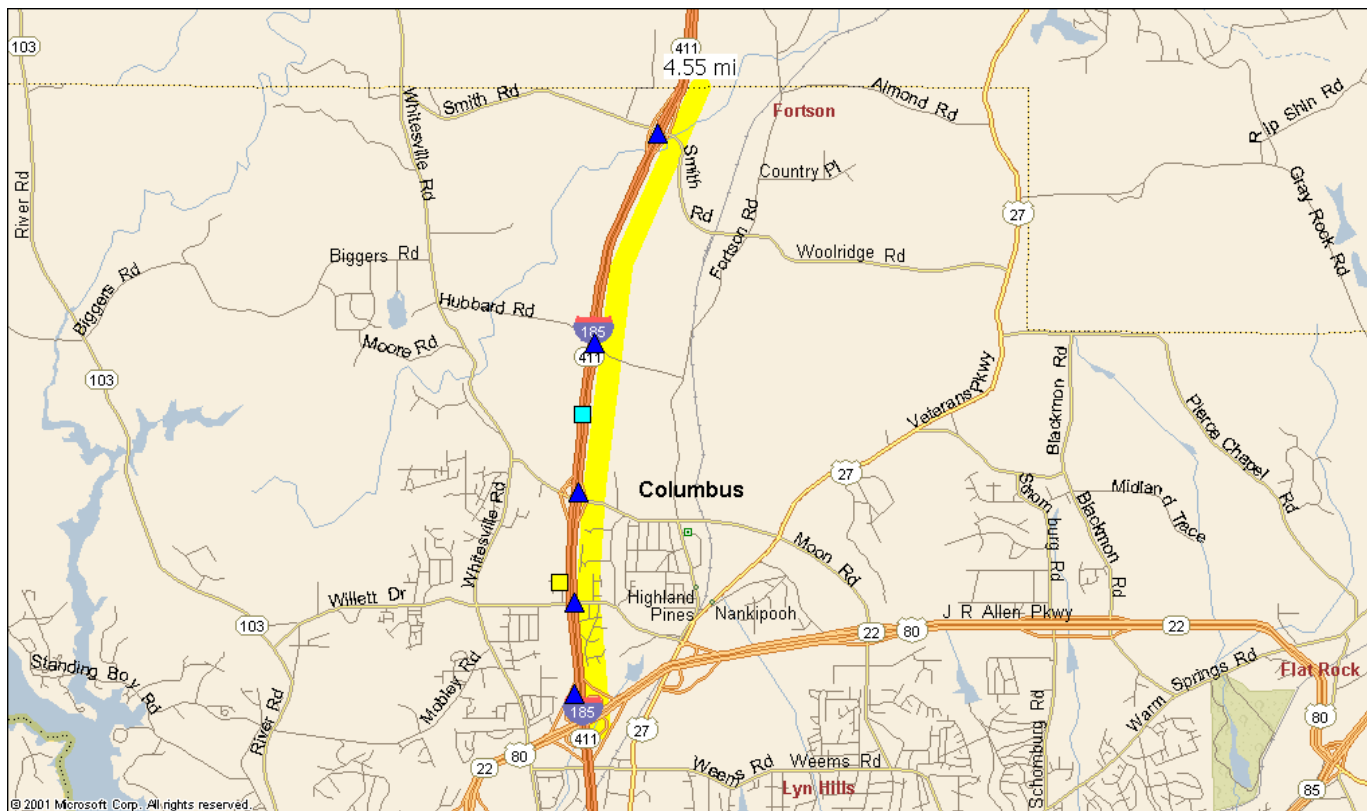


\*Typical Sections do not include acceleration, deceleration, or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



#### LEGEND

— - Project Location

▲ - CCTV (Closed Circuit Television) - Proposed

▲ - Dynamic Fog Detection System - Proposed

● - DMS (Dynamic Message Sign) - Already Installed

■ - DMS (Dynamic Message Sign) - Proposed

■ - HAR (Highway Advisory Radio) - Proposed

■ - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	4 lane expressway with 44' grass median	6 lane freeway with possible concrete barrier
Shoulder	2' inside, 10' outside	10' inside, 12' outside
Speed Design	70 mph	70 mph
Pavement	Asphalt	Portland Cement Concrete
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	Call boxes	HAR, DMS, CCTV
Bridges	Woolridge Road	Same
Access Control	Controlled	Controlled



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	N/A
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	One stream
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Muscogee  
**Map Code** 169  
**Route** I-185  
**Location Description** I-185 from US 80 to North Muscogee County line  
**Prepared By** David Low  
**Date Last Updated** 12/17/02

### Recommendation Description

Widen from 4 to 6 lanes from US 80 to North Muscogee County line with standard inside and outside shoulders.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	4.2	2 lanes	\$2,650,212	\$11,130,890
Source of Unit Cost		FDOT 2000 Transportation Costs	\$2,453,900	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
over Woolridge Road	200	41	8,200	\$60	\$492,000

### Signals

none

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic locations	5	\$10,000	\$50,000
Fiber Optic Cable Installed Urban	4.6 mi.	\$264,000 per mi.	\$1,214,400
Dynamic Message Sign	1	\$120,000	\$120,000
Highway Advisory Radio	1	\$26,000	\$26,000
			<u>\$1,410,400</u>

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial			0	0.00	\$250,000	\$0
residential			0	0.00	\$55,000	\$0
Land Subtotal						\$0
Improvements Taken						\$0
Relocation						\$0
Damages						\$0
Subtotal						\$0
<u>Rural</u>						
Land			0	0.00	\$10,000	\$0
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$0
<u>Net Cost</u>						\$0
<u>Scheduling Contingency</u>						\$0
<u>Admn/Court Cost</u>						\$0
<u>Inflation Factor</u>						\$0
<u>Right of Way Total</u>						\$0

### Summary

Highway	\$11,130,890
Bridges	\$492,000

Signals	0	
ITS	<u>\$1,410,400</u>	
Construction Subtotal	\$13,033,290	
CEI	\$1,303,329	10% of construction subtotal
Construction Estimate	\$14,336,619	construction subtotal plus CEI
Preliminary Engineering	\$1,303,329	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$0	
Utility Relocation	\$260,666	2% of construction subtotal
Total	\$15,900,614	





## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to reduce congestion and create a safer environment for freight movement. Significant traffic congestion exists on I-75, a major access route to the Warner Robins area, including the large Robins Air Force base. The described location is on STRAHNET, has 14 percent trucks, and therefore, is a freight focused corridor. This segment of roadway is classified as a rural interstate. The 3 year accident rate from 1995-1997 for the roadway segment is 38 as compared to the statewide average of 49 for rural interstates. The current AADT is 66,500 and the current volume to capacity ratio is .57-.78. With no improvement, the corridor is anticipated to have an AADT of 112,626 and a volume to capacity ratio of .95-1.3 by 2025, indicating congestion along the corridor. In 1998 the corridor operated at a LOS C and would have operated at a LOS B with the project in place. In 2025 the corridor will operate at a LOS F without the project and a LOS of D with the project in place. Implementation of this project will improve the LOS.				County		Peach	
				Map Code		179	
				Route #		I-75	
				GDOT District		3	
				Cong. District		3	
				RDC		Middle Georgia	
				Length		11.4 miles	
				Mileposts			
From: S Peach Co Line		To: N Peach Co Line					
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	Yes	
Traffic Vol.:	66,500	112,600	1995-1997 3 year Accident Rate	38 rural interstate			
Truck %:	14%	14%	% Increase in Travel Speed	10%	% Increase in Capacity	33%	
No. of Lanes	6	8	% Shift in Non-Freight	0%			
<b>PROJECT DESCRIPTION:</b>  Widen I-75 from a six lane section to eight lanes  The system includes Closed Circuit Television (CCTV) monitoring, communication links to Macon/Bibb County Regional Transportation Control Center (TCC), Highway Advisory Radio (HAR) and Dynamic Message Signs (DMS). The system will be linked to the Macon/Bibb County TCC to monitor traffic flow to Warner Robins and incoming Macon traffic and to provide traveler information to both automobile and truck traffic on major routes entering the area.							



# Central Georgia HPC 6 Corridor Management Plan

Project Phase	Funding Source	Total Cost Estimate
Preliminary Engineering	IM, STP or NHS	\$3,507,000
Right-of-Way	IM, STP or NHS	\$3,182,000
Utilities	Local	\$701,000
Construction	IM, STP or NHS	\$38,578,000
<b>Project Cost</b>		<b>\$45,969,000</b>

Location and Environmental Resource Map

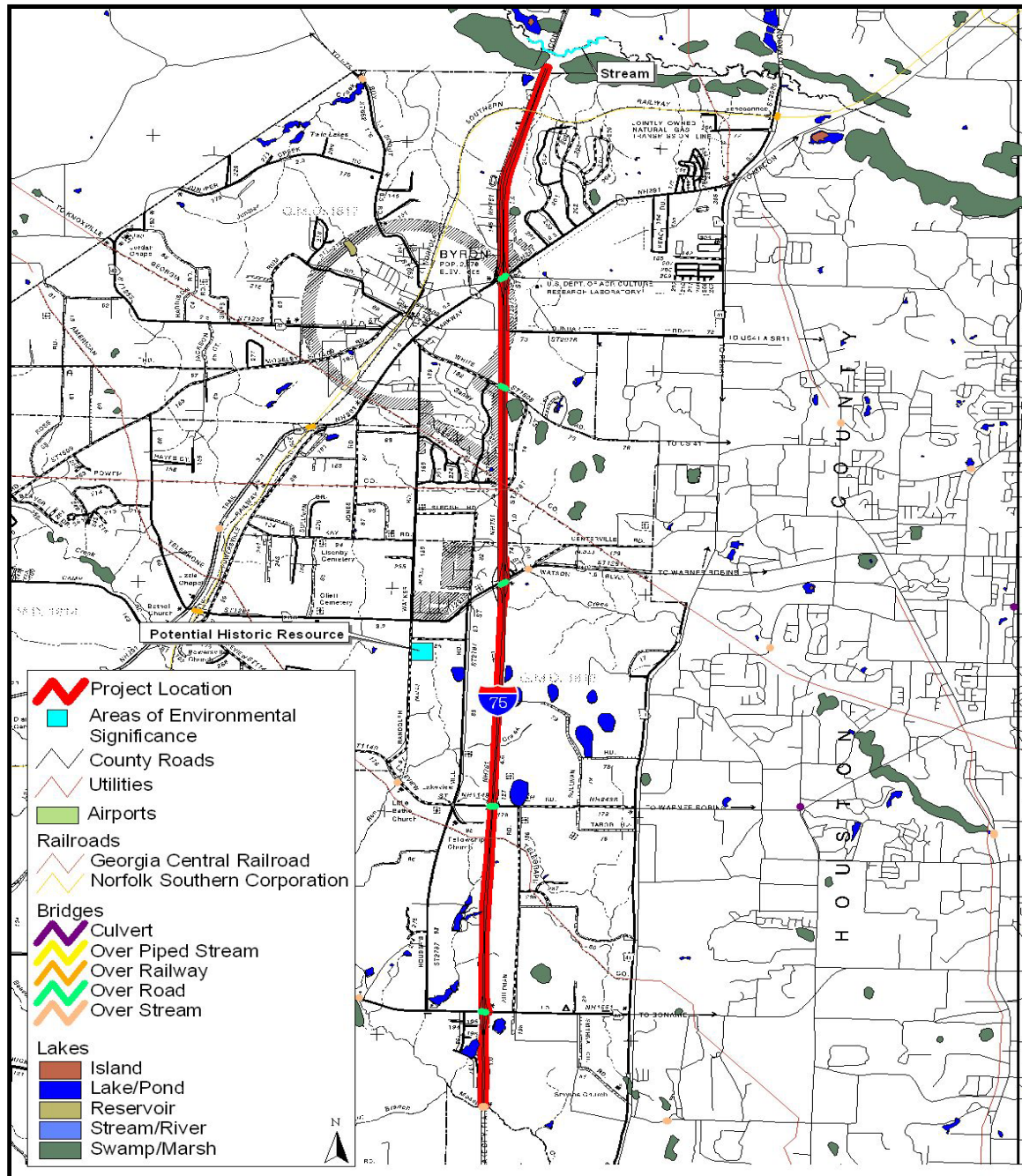


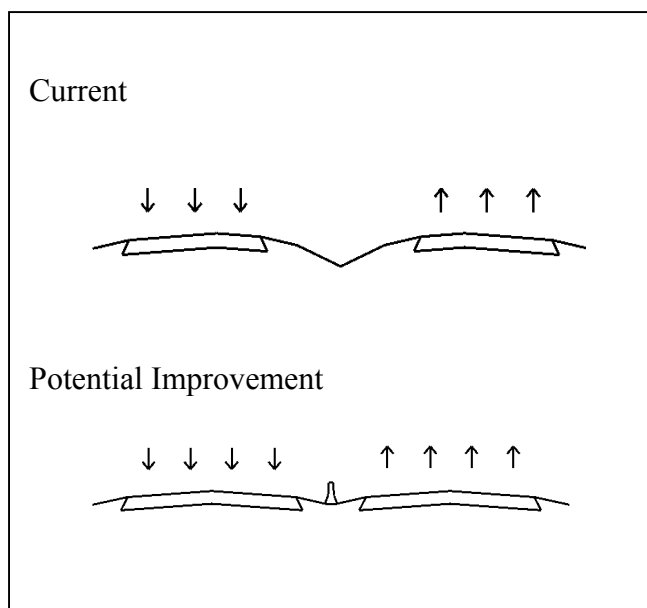


Photo of location



I-75 in Peach County

Typical Section\*

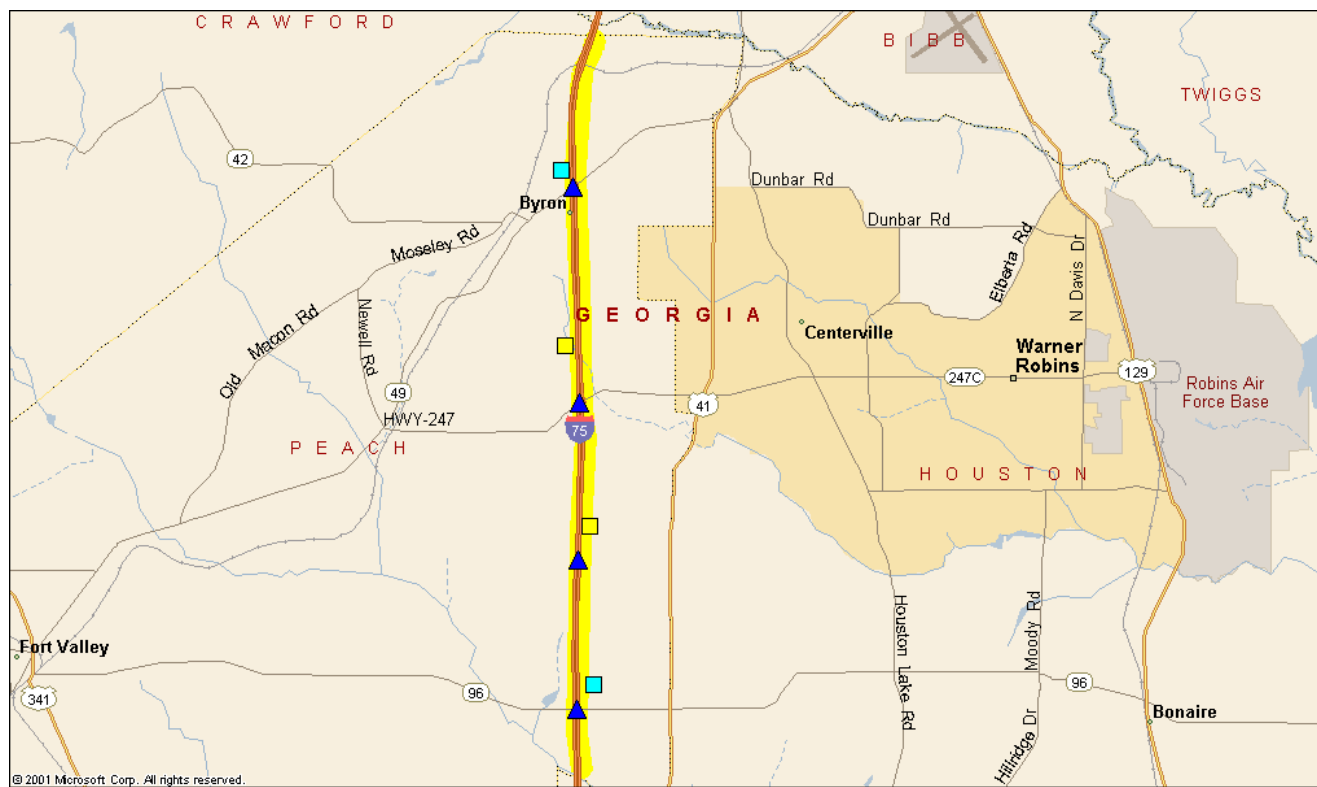


\*Typical Sections do not include acceleration, deceleration or left turn lanes.



## Central Georgia HPC 6 Corridor Management Plan

### ITS Location Map



Note to Map code 179: The location of the CCTV camera indicates the intersection which should be outfitted with CCTV cameras. Since most cameras are 360 degree, full tilt, the map indicates the coverage locations and not the exact placement of the camera(s). Usage of existing infrastructure would be used when possible to reduce costs. The HAR symbol indicates the center of the coverage area for HAR. As with the CCTV installation, existing infrastructure would be utilized when appropriate.

#### LEGEND

Yellow line - Project Location

Blue triangle - CCTV (Closed Circuit Television) - Proposed

Purple triangle - Dynamic Fog Detection System - Proposed

Yellow circle - DMS (Dynamic Message Sign) - Already Installed

Yellow square - DMS (Dynamic Message Sign) - Proposed

Cyan square - HAR (Highway Advisory Radio) - Proposed

Purple square - Dynamic Fog Warning Sign - Proposed



## Central Georgia HPC 6 Corridor Management Plan

### Design and Construction Issues (From field observations)

Issue	Existing	Proposed
Typical Section	6 lane freeway with 12' lanes	8 lane freeway
Shoulder	10' inside, 10' outside	10' inside, 12' outside
Speed Design	70 mph	70 mph
Pavement	PCC and asphalt through lanes, asphalt shoulders	PCC
Signing and Marking	Per GDOT Standards	Per GDOT Standards
ITS Opportunities	None	CCTV, DMS, HAR
Bridges	Mossy Creek	Same
Access Control	Controlled	Controlled



## Environmental Issues (From field observations)

Issue	Comments / Observations
History	One potential resource
Archaeology	To be determined during concept phase
Neighborhoods	N/A
EJ Communities	N/A
Context Sensitive Design Suggestions	N/A
Churches, Cemeteries and Public Institutions	N/A
Parks and Recreation	N/A
Wetlands and Streams	One stream and one wetland
Wildlife Refuge	N/A
Endangered Species	N/A
Air Quality	N/A
Noise	N/A
<b>Possible Permits</b>	N/A
404	Nationwide Permits
FEMA	N/A
USCG	N/A
<b>Environmental Document</b>	N/A
CE	N/A
EA	Yes

## Recommendation Description Initial Cost Estimate

**County** Peach  
**Map Code** 179  
**Route** I-75  
**Location Description** I-75 from S Peach County line to N Peach County line  
**Prepared By** David Low  
**Date Last Updated** 12/17/02

**Recommendation Description**  
 Widen from 6 to 8 lanes.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	11.4	2 lanes	\$2,763,936	\$31,508,870
Source of Unit Cost		FDOT 2000 Transportation Costs	\$2,559,200	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		

### Bridges

	Length (ft)	Width (ft)	Area	Unit Cost	Total
over Mossy Creek	300	24	7,200	\$60	\$432,000

**Signals**  
 none

### ITS

Component	# Units	Unit Cost	Totals
CCTV at strategic location:	4	\$10,000	\$40,000
Fiber Optic Cable Installed	10.6 mi.	\$264,000 per mi.	\$2,798,400
Dynamic Message Sign	2	\$120,000	\$240,000
Highway Advisory Radio	2	\$26,000	\$52,000
			<u>\$3,130,400</u>

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	8.4	30	1,330,560	30.55	\$30,000	\$916,364
Improvements Taken						0
Relocation						0
Damages						0
Subtotal						\$916,364
<u>Net Cost</u>						\$916,364
<u>Scheduling Contingency</u>						\$504,000
<u>Admn/Court Cost</u>						\$852,218
<u>Inflation Factor</u>						\$909,033
<u>Right of Way Total</u>						<b>\$3,181,615</b>



**Summary**

Highway	\$31,508,870	
Bridges	\$432,000	
Signals	0	
ITS	\$3,130,400	
Construction Subtotal	\$35,071,270	
CEI	\$3,507,127	10% of construction subtotal
Construction Estimate	\$38,578,397	construction subtotal plus CEI
Preliminary Engineering	\$3,507,127	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$3,181,615	
Utility Relocation	\$701,425	2% of construction subtotal
Total	\$45,968,564	



# **APPENDIX B**

## **FUNDING SOURCES**

## **Introduction**

Appendix B presents potential funding sources for transportation investments proposed in the Central Georgia Corridor. Many of these projects fall within the designation of the High Priority Corridor Six (HPC 6) corridor and, as such, are eligible for an additional funding source specifically set aside for projects within high priority corridors by the discretionary National Corridor Planning and Development (NCPD) Program. Projects that are eligible yet do not receive NCPD funding or are located outside of the corridor and thus are not eligible for NCPD funding must rely on standard financing techniques. Traditional financing options for highways, the NCPD High Priority Corridor funding source, and new Federal Highway Administration (FHWA) approved innovative financing techniques are discussed in the following pages. Each of these sources could facilitate the funding necessary to initiate these transportation projects.

## **Federal Funding**

Transportation financing in Georgia is currently provided by a combination of federal, state, and local funding sources, with federal funding being the dominant source of funds. In FY1999, over 51 percent of the Georgia Department of Transportation's (GDOT's) revenue came from federal sources. The primary source of federal funds is the U.S. Department of Transportation's (USDOT's) Federal Highway and Transit Administrations (FHWA and FTA) pursuant to the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) which sets apportionment funding values for each state. The major source of funding for these programs is the 18.4 cent per gallon federal gasoline tax that forms the core component of the national Highway Trust Fund. Similar trust funds are in place for other transportation modes such as aviation and transit.

Highway projects generally require high levels of funding and take long periods of time to enter the funding stream. Therefore, it is standard to look at the funding environment over a 25-year horizon. The key factor in projecting future highway funding is forecasting the growth of the Highway Trust Fund (HTF). The Congressional Budget Office (CBO) and the Office of Management and Budget (OMB) forecast an average annual growth rate in the fund of 2.1 percent over the next ten years. The forecasts assume that there will be no significant changes to the apportionment formula for Georgia over the next 25 years.

Georgia law requires that funding be equal by congressional district. This is most easily satisfied by basing spending per county on its relative percentage share of population. This implies that rural, underdeveloped counties with small populations will have less money to implement new projects than more developed counties with higher populations. Over the course of a 25-year planning horizon, the disparity between highly and sparsely populated counties will grow as highway improvements remain focused around population centers.

## Federal Formula Funding Programs

Federal Highway Trust funds are made available to Georgia through specific programs established as part of the Title 23 of the United States Code. These programs are referred to as "formula" programs because specific portions of the federal apportionments are allocated to the states based on formulas.

### *National Highway System*

The National Highway System (NHS), as authorized by the Intermodal Surface Transportation Efficiency Act of 1991 (1991 ISTEA, Public Law 102-240), was designated by law in Section 101(a) of the National Highway System Designation Act of 1995 (1995 NHSDA, Public Law 104-59). The purpose of the NHS program is to provide an interconnected system of principal arterial routes which (1) serve major population centers; international border crossings; ports, airports, public transportation facilities, and other intermodal transportation facilities; and other major travel destinations; (2) meet national defense requirements; and (3) serve interstate and interregional travel. There are 161,000 miles on the NHS in the United States. Georgia has 4,596 miles of NHS, 1,269 miles of which are located in the Central Georgia study area. In FY2002, \$6.4 billion was apportioned for the NHS program nationally, with Georgia apportioned \$216.7 million.

### *Interstate Maintenance*

The Interstate Maintenance (IM) Program was established by the Intermodal Surface Transportation Efficiency Act of 1991 (1991 ISTEA, Public Law 102-240) and amended by the Transportation Equity Act for the 21st Century (TEA-21, Public Law 105-178). ISTEA replaced the restoration, rehabilitation, and resurfacing portions of the former Interstate 4R Program, whereas NHS funding addressed the reconstruction (fourth "R") portion. TEA-21 expanded the IM program to include the fourth "R" - reconstruction. ISTEA also amended 23 U.S.C. 119(e) to allow IM funding for preventive maintenance activities when a state can demonstrate through its pavement management system that such work would cost-effectively extend the Interstate pavement life. By expanding the IM program to include reconstruction, TEA-21 allowed IM funding to be used for new interchanges, new rest areas, additional noise walls, etc. and, if subject to a 23 U.S.C. 129 agreement, toll roads. The Interstate system consists of 46,000 miles nationally, including 1,244 miles in Georgia, with 391 miles of those located in the Central Georgia study area. In FY 2002, \$5.2 billion was apportioned nationally for the IM program, with \$222.5 million apportioned for Georgia.

### *Bridge Replacement and Rehabilitation*

Section 204 of the Federal-aid Highway Act of 1970 (Public Law 91-605) established a "Special Bridge Replacement Program" which was codified in 23 U.S.C. 144. Projects under this program had to be on a Federal-aid highway system. Section 124 of the Surface Transportation Assistance Act of 1978 (1978 STAA, Public Law 95-599) retitled and amended 23 U.S.C. 144 to provide a "Highway Bridge Replacement and Rehabilitation Program (HBRRP)" that was applicable to bridges both on and off the Federal-aid highway system (i.e., on and off-system bridges). It was stipulated that not

less than 15 percent and not more than 35 percent of state apportionments for FYs 1979-1982 were to be spent off-system. The optional 20 percent of these funds, the portion between 15-35 percent, could be spent either for on-system or off-system bridge replacement or rehabilitation. In FY 2002, \$4.4 billion was apportioned nationally for the BRR program, with \$86 million apportioned for Georgia.

### *Surface Transportation Program*

The Surface Transportation Program (STP) was established by Section 1007 of the Intermodal Surface Transportation Efficiency Act of 1991 (1991 ISTEA, Public Law 102-240) and has been continued by the Transportation Equity Act for the 21st Century (TEA-21, Public Law 105-178) under 23 U.S.C. 149. Funds apportioned under STP are eligible for a variety of projects, including:

- Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for highways, including Interstate highways, and bridges on roads eligible for federal aid.
- Capital costs for transit projects eligible for assistance under chapter 53 of Title 49, United States Code.
- Carpool projects, fringe and corridor parking facilities and programs, bicycle and pedestrian facilities (off-road or on-road, including modification of walkways) on any public road in accordance with 23 U.S.C. 217, and the modification of public sidewalks to comply with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.).
- Highway and transit safety infrastructure improvements and programs, hazard eliminations, projects to mitigate hazards caused by wildlife, and railway-highway grade crossings.
- Capital and operating costs for traffic monitoring, management, and control facilities and programs.
- Transportation enhancement activities.
- Transportation control measures for air quality purposes.
- Infrastructure based Intelligent Transportation Systems capital improvements.

There are over 956,000 miles of federal aid eligible roads in the United States, with 30,386 miles of federal aid eligible roads in Georgia and 8,178 miles located in central Georgia (including 633 miles in urban areas over 200,000 population and 7,545 miles in areas with less than 200,000 urban populations, including small urban and rural areas). In FY 2002, \$7.5 billion was apportioned nationally for the STP program, with \$297.2 million apportioned for Georgia. In addition, Georgia was apportioned \$146 million in Minimum Guarantee funding, intended to make the annual apportionment to Georgia equal to its federal gas tax receipts, which is administered as STP funding.

### STP Large Urban

Fifty percent of the Surface Transportation Program (STP) funds (62.5 percent of the remaining 80 percent after the 10 percent set-a-sides for the safety improvement and transportation enhancement programs) apportioned to a state is divided between urbanized areas over 200,000 in population and the remaining areas of the state in proportion to their relative share of the state's population. Funds for urbanized areas over 200,000 in population are further sub-allocated based on each area's share of population in areas over 200,000 in population in the state. There are two urban areas with populations over 200,000 in the Central Georgia study area: Columbus and Savannah.

### STP Enhancements

Ten percent of the STP funds apportioned to a state each fiscal year may only be used for transportation enhancement activities. Transportation enhancement activities, with respect to any Federal-aid project or the area to be served by the project, are the following activities:

- Provision of facilities for pedestrians and bicycles (off-road or on-road facilities, including modification of existing public sidewalks to comply with the requirements of the Americans with Disabilities Act).
- Provision of safety and educational activities for pedestrians and bicyclists.
- Acquisition of scenic easements and scenic or historic sites.
- Scenic or historic highway programs (including the provisions of tourist and welcome center facilities).
- Landscaping and other scenic beautification.
- Historic preservation.
- Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals).
- Preservation of abandoned railroad corridors (including the conversion and use for pedestrian or bicycle trails).
- Control and removal of outdoor advertising.
- Archaeological planning and research.
- Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.
- Establishment of transportation museums.

### STP Safety

Ten percent of STP funds are earmarked for safety, with amounts reserved separately in each state for rail-highway crossing and hazard elimination activities that are at least as much as were apportioned for those purposes in FY 1991. Any additional funds remaining after those reservations may be used for either rail-highway or hazard elimination activities. If enough funds are not available for the above reservations, the two categories are reduced proportionately.

## STP Statewide Rural and Small Urban

The balance of STP funding not set aside for urban areas with over 200,000 in population, transportation enhancements, or safety is made available under this sub-program.

### *Congestion Mitigation and Air Quality Improvement Program*

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program was established by the Intermodal Surface Transportation Act of 1991 (1991 ISTEA, Public Law 102-240) and has been continued by the Transportation Equity Act for the 21st Century (TEA-21, Public Law 105-178) under 23 U.S.C. 149. The new TEA-21 CMAQ program is 35 percent larger than ISTEA's program, with funding authorized at \$8.1 billion over six years (FYs 1998-2003). Under 23 U.S.C. 104(b)(2)(B), each state is apportioned funding based on county populations residing within ozone and carbon monoxide (CO) non-attainment and maintenance areas and the severity of the area's air quality problems. Extra weighting is given to non-attainment or maintenance areas with both ozone and CO problems. CO maintenance and non-attainment areas are also apportioned funding even if no ozone problems exist under TEA-21. In FY, \$1.8 billion was apportioned nationally to the CMAQ program, with Georgia apportioned \$40.8 million. While there is no requirement that CMAQ funds be spent in non-attainment or maintenance areas, it is expected to be as such. There are currently no air quality non-attainment or maintenance areas in the Central Georgia study area. Eligible projects/programs include:

- Transportation activities in an approved State Implementation Plan (for air quality).
- Transportation control measures to assist areas designated as non-attainment under the Clean Air Act Amendments (CAAA) of 1990.
- Pedestrian/bicycle off-road or on-road facilities, including modification of existing public walkways to comply with the Americans with Disabilities Act.
- ISTEA management and monitoring systems.
- Traffic management/monitoring/congestion relief strategies.
- Transit (new system/service expansion or operations).
- Alternative fuel projects (including vehicle refueling infrastructure).
- Public/private partnerships and initiatives.
- Inspection and maintenance (I/M) programs.
- Intermodal freight.
- Alternative fuels (including clean fuel fleet programs and conversions).
- Telecommunications.
- Travel demand management.
- Project development activities for new services and programs with air quality benefits.
- Public education and outreach activities.
- Rideshare programs.
- Establishing/contracting with transportation management associations (TMAs).
- Fare/fee subsidy programs.
- Experimental pilot projects/innovative financing.
- Other Transportation projects with air quality benefits.



Ineligible projects include construction of projects which add new capacity for single occupancy vehicles.

### *Discretionary Funding*

#### National Corridor Planning and Development Program

An alternative source of funding that is limited to specifically designated corridors across the country is attainable through the National Corridor Planning and Development (NCPD) Program. Founded in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA), the NCPD provides funding to states and metropolitan planning organizations (MPOs) for planning, design, and construction of corridors which have been designated of national significance, economic growth and international or interregional trade, such as Georgia's HPC 6. There are many high priority corridors (21 corridors identified in ISTEA, 8 added in the 1995 National Highway Designation Act, 14 added by the 1998 TEA-21, plus others that may be added by Congress in subsequent legislation) and many eligible projects within those corridors.

Eligibility for funds from the NCPD is limited to states and MPOs who may apply for funds for the following projects:

- The 21 corridors identified in ISTEA, 8 additional corridors added in the 1995 National Highway Designation Act, and 14 corridors added by the 1998 TEA-21, as well as any modifications to these corridors made in succeeding legislation. [1211]<sup>1</sup>
- Other significant corridors selected by the Secretary considering: [1118(b)]
  - (1) Any increase since the North American Free Trade Agreement (NAFTA) in commercial vehicle traffic volume at border stations or ports of entry in each state and in the state as a whole.
  - (2) Projected further increases of such traffic.
  - (3) Flow of international truck-borne commodities through each state.
  - (4) Reduction in travel time through a major international facility.
  - (5) Leveraging of Federal funds via use of innovative financing, using funds from other Title 23 programs, other Federal funds and/or state, local and private funds.
  - (6) Value of cargo and the economic costs of congestion.
  - (7) Economic growth and development in areas underserved by existing highway infrastructure.

Eligible work for corridor funds includes: [1118(c)]

- Planning, coordination, design, and location studies.
- Environmental review and construction (subsequent to the Secretary's review of a corridor development and management plan).

---

<sup>1</sup> The listing in the brackets references the applicable section of TEA-21.

A corridor management plan shall include: [1118(d)]

- A complete and comprehensive analysis of corridor costs and benefits.
- A coordinated schedule showing completion of plans, development activities, environmental reviews and permits, and construction of all segments.
- A finance plan, including any innovative financing methods and, if a multistate corridor, including a state-by-state allocation.
- Results of any environmental reviews and mitigation plans.
- Identification of any impediments to the development and construction of the corridor, including any environmental, social, political and economic objections.

Corridor planning shall be coordinated with transportation planning of state, metropolitan, and Federal land, tribal government, and Mexican and Canadian agencies. [1118(f)]

The federal register covering the rules for NCPD is at <http://www.epa.gov/fedrgstr/EPA-IMPACT/1998/November/Day-12/i30236.htm>.

Funding for the NCPD comes from a combined pool which is dedicated to the NCPD and the Coordinated Border Infrastructure Program (CBIP). In FY2003, the combined funding for these two programs was \$140 million per year. The limited funding and increasing number of eligible corridors and projects has tightened the competition for funding within the limits of the program. Assuming the CBIP and NCPD split the \$140 million that is annually allocated to the two programs, each program would receive \$70 million. As the CBIP applies only to projects that improve the safe movement of people and goods at or across the borders between the United States and Canada or Mexico, Georgia is not eligible for this funding. Given that there are 43 eligible corridors within the NCPD, if funding were equal among all corridors, each corridor would receive \$1.6 million dollars. The HPC 6 corridor involves two states so, on that basis, \$1M per year for Georgia is actually above average.

Given the funding levels and project loads associated with the NCPD, the program does not represent a large enough funding source to provide substantial funding for improvements to Georgia's eligible corridor. In the FY 2002 funding cycle, Georgia applied for NCPD funding for seven projects along HPC 6 (Table 1). While each of these projects applied for NCPD funding, the program is extremely competitive with only a small portion of the projects requesting money being funded. In Georgia, only the US 19/US 129/SR 11 Connector received funding through the program in 2002 for \$1,000,000 through the Federal earmark process. In fact, during the FY2002 funding cycle, all of the selected projects were determined by congressional earmark.

Georgia is revising its other applications to strengthen its competitive position for future year funding through this source. However, based on the actions of the U.S. Senate, FHWA officials indicate that, as was the case in FY2002, it is likely that all of the funding for FY2003 will also be allocated through the federal earmark process. Additionally, many of the projects that would best facilitate movement on HP6 are located on roads feeding the HP6 corridor and not necessarily within the designated corridor.

**Table 1: Georgia sponsored HPC6 Projects FY2002**

<b>Project</b>	<b>Request Amount</b>
Widening of Georgia's HPC6 corridor in the immediate vicinity of the Garden City Terminal at the Port of Savannah along SR 307 from Miller Road to SR 21 in Chatham County.	\$480,000
Improve access of HPC6 Corridor in the immediate vicinity of the Ocean Terminal at the Port of Savannah at the I-16 and I-516 interchange.	\$400,000
Safety related to interchange improvements to Georgia's HPC6 located east of Macon at the interchanges of I-16/SR 112 in Bleckley County and I-16/SR 26 in Laurens County.	\$3,200,000
Safety related interchange and bridge improvements to HPC 6 at the interchanges of I-16 with SR 15, SR 56, SR 297 and SR 4 in Emmanuel County.	\$5,760,000
Safety related interchange and bridge improvements to HPC 6 located east of Macon at the interchanges of I-16/SR 199 in Laurens County and I-16/SR 29 in Treutlen County.	\$6,880,000
Safety related interchange and bridge improvements to HPC6 located east of Macon at the interchanges of I-16 with SR 338, SR 257 and SR 19 in Laurens County.	\$10,000,000
ROW and construction of the HPC6, located east of Columbus along SR 96 from the Flint River on the Taylor/Crawford County line to Ft. Valley (SR 49) in Peach County.	\$15,298,400

### *Innovative Financing Programs*

In addition to the core sources of federal funds identified in the State Transportation Plan, FHWA launched the Innovative Finance Program, known as the Test and Evaluation Project TE-045, in 1994. Under this program, states were invited to come forward with new financing methods not generally permissible under traditional federal-aid programs. Furthermore, Congress authorized a new credit program known as the Transportation Infrastructure Finance and Innovation Act (TIFIA) in 1998. TIFIA authorizes the USDOT to provide secured loans, loan guarantees and standby lines of credit to private and public sponsors of eligible transportation projects. The objective of TIFIA is to use credit rather than grants to leverage limited federal funding in a prudent, budget-effective manner. These tools are primarily geared towards assisting in managing a project's cash flow or providing up-front credit to get the project going. None can be expected to change the basic calculation of actual available funding to support the project.

### **State Funding Sources**

Georgia fees and taxes for transportation are well below the national average and below the average for the southeastern states. Motor fuel gas tax is among the lowest in the nation, at 7.5 cents per gallon plus four percent fuel sales tax (of which three percent goes to the transportation fund and the remaining cent accrues to the General Fund). Motor fuel gas tax levies are dedicated to transportation investments and are GDOT's

primary source of state transportation funding. According to the Georgia State Transportation Plan and GDOT forecasts, the Motor Fuel Tax is expected to raise \$584 million in FY 2002 and over \$18 billion over the next 25 years.

Georgia auto and truck registration fees are also among the lowest in the nation, at \$20 for automobiles and an average of \$154 for trucks. Revenues collected from registration fees go directly to Georgia's General Fund, not specifically for transportation purposes. A small amount of revenue is also raised by the Georgia State Tollway Authority by means of highway tolls on Georgia Route 400.

### **Local Funding**

Local transportation funding sources in Georgia are usually reserved for local street improvements or transit projects and are not generally a significant source of highway funding. GDOT provides some funding for local governments to provide roadway maintenance and improvements through programs such as Local State Aid, State-Assisted Maintenance and county contracts for off-system maintenance. According to the Georgia State Transportation Plan, GDOT is expected to provide \$2.7 billion in local transportation aid over the next 25 years from federal appropriations and the state Motor Fuel Fund. This funding is included in the amounts raised under the Motor Fuel Tax and thus does not represent additional funding.

### **Summary**

Georgia has developed a listing of key projects to act as an economic catalyst. As indicated in the Statewide Transportation Plan: 2001-2025, the expense of all of GDOT's commitments is greater the state can afford under its present revenue streams. Therefore, the state is hoping to capitalize on the designation of Georgia's HPC 6 to capture special federal funding sources dedicated to projects within the NCPD corridors. The amount expected to be available to Georgia for discretionary projects under the National Corridor Planning and Development Program is expected to be relatively modest (approximately \$1 million per year) based on existing appropriations. For projects that either don't receive or are not eligible for NCPD funding, the state must program those projects with its traditional existing federal and state programs as described above or seek to obtain additional funding from other sources.



# **APPENDIX C**

## **STAA/NHS/STRAHNET MAPS**



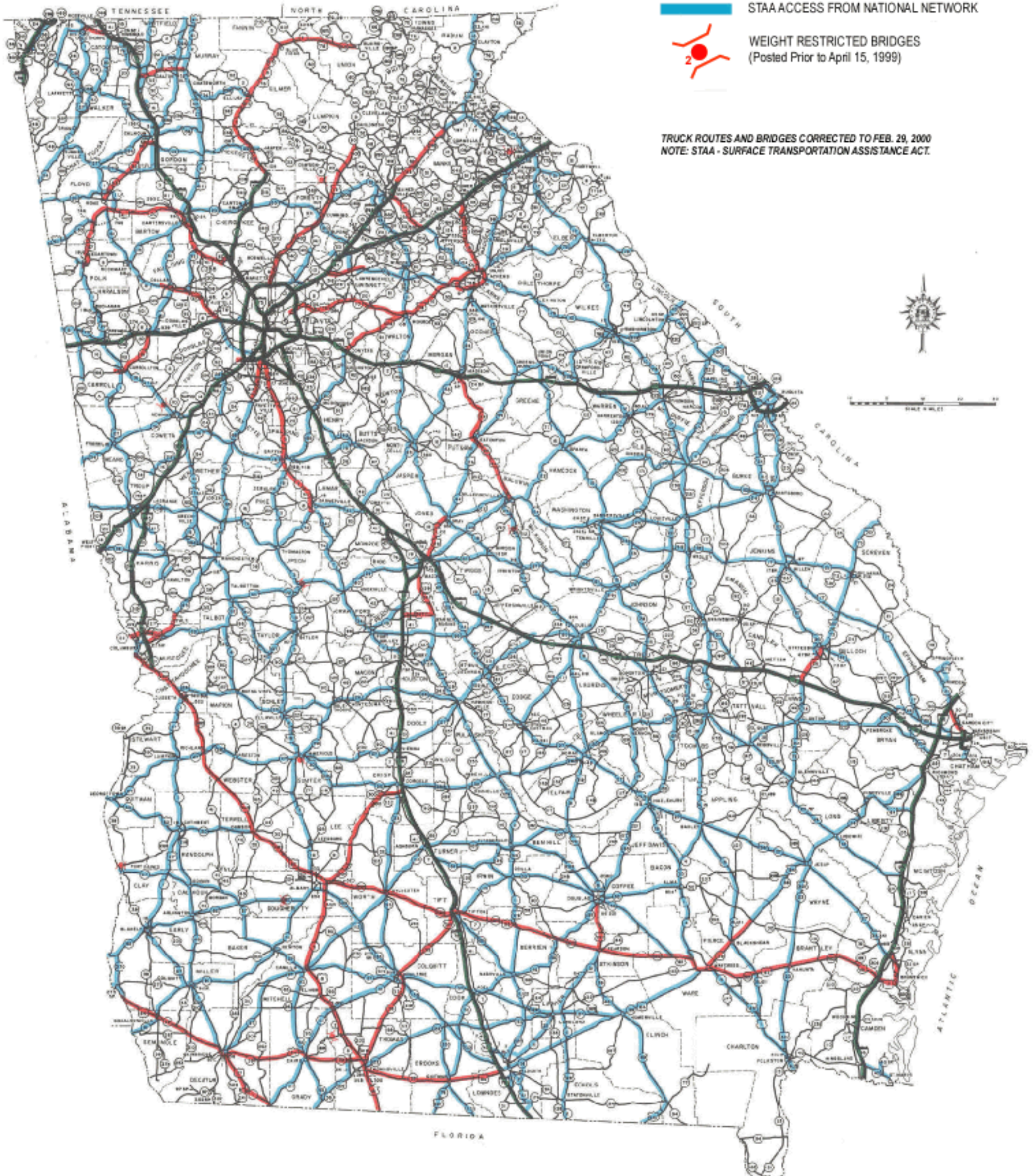
# GEORGIA OVERSIZE TRUCK ROUTES

## STAA NATIONAL NETWORK

- INTERSTATES
- OTHER NATIONAL NETWORK ROUTES
- STAA ACCESS FROM NATIONAL NETWORK

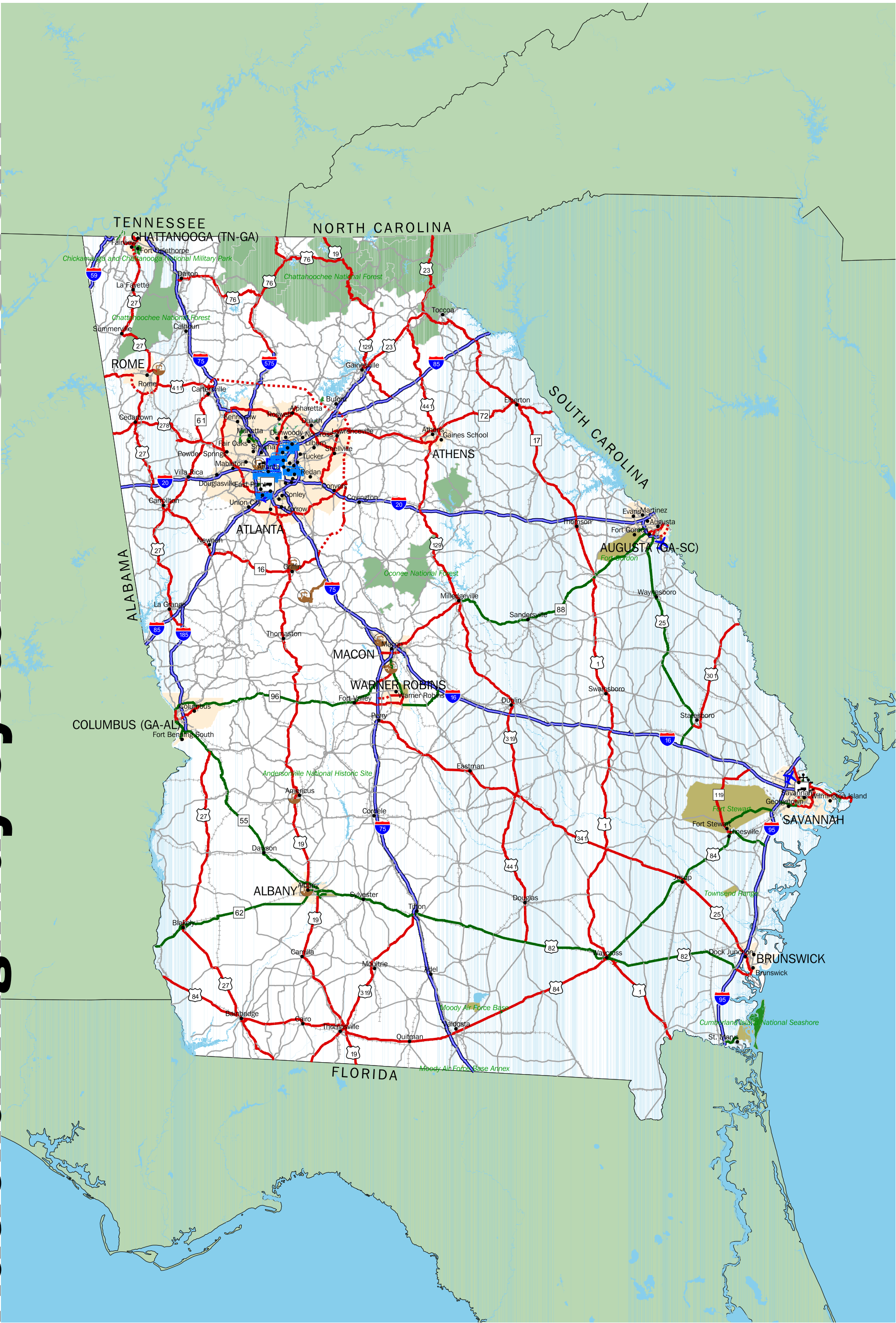



TRUCK ROUTES AND BRIDGES CORRECTED TO FEB. 29, 2000  
NOTE: STAA - SURFACE TRANSPORTATION ASSISTANCE ACT.





# GEORGIA National Highway System

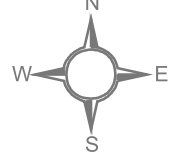




U. S. Department of Transportation  
Federal Highway Administration

### Legend

	Eisenhower Interstate System		Airport		Intercity Bus Terminal		Urbanized Area
	STRAHNET Route		Port Terminal		Public Transit Station		Department of Defense
	Other NHS Route		Truck/Rail Facility		Truck/Pipeline Terminal		Forest Service
	Intermodal Connector		AMTRAK Station		Ferry Terminal		National Park Service
	Proposed NHS Route				Multipurpose Passenger Facility		Indian Reservation
	Other Roads (not on NHS)						Water
	Railroad						



0 20 40 Miles

0 20 40 Kilometers

FHWA\HEPS-20 :: July 2001



# GEORGIA

## LEGEND

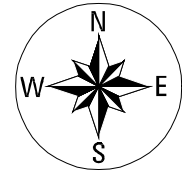
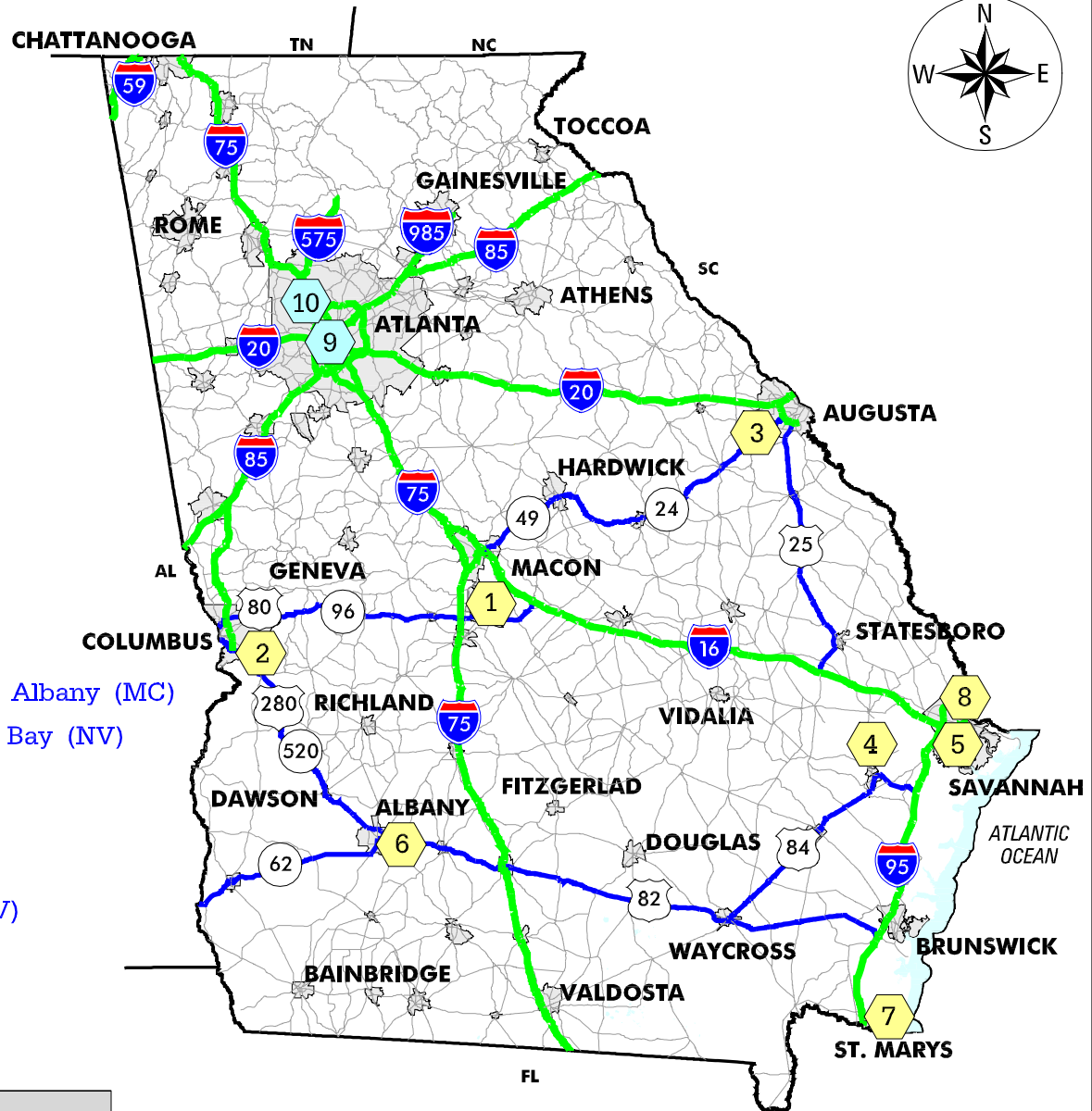
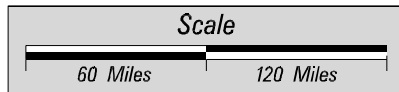
- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- OTHER ROADS

URBAN AREAS

PRIORITY 1

PRIORITY 2








- 1 Robins Air Force Base (AF)
- 2 Fort Benning (AR)
- 3 Fort Gordon (AR)
- 4 Fort Stewart (AR)
- 5 Hunter Army Airfield (AR)
- 6 Marine Corps Logistics Base Albany (MC)
- 7 Naval Submarine Base, Kings Bay (NV)
- 8 Port of Savannah (PND)
- 9 Fort McPherson (AR)
- 10 Naval Air Station Atlanta (NV)



Last Updated: 7 FEB 2001

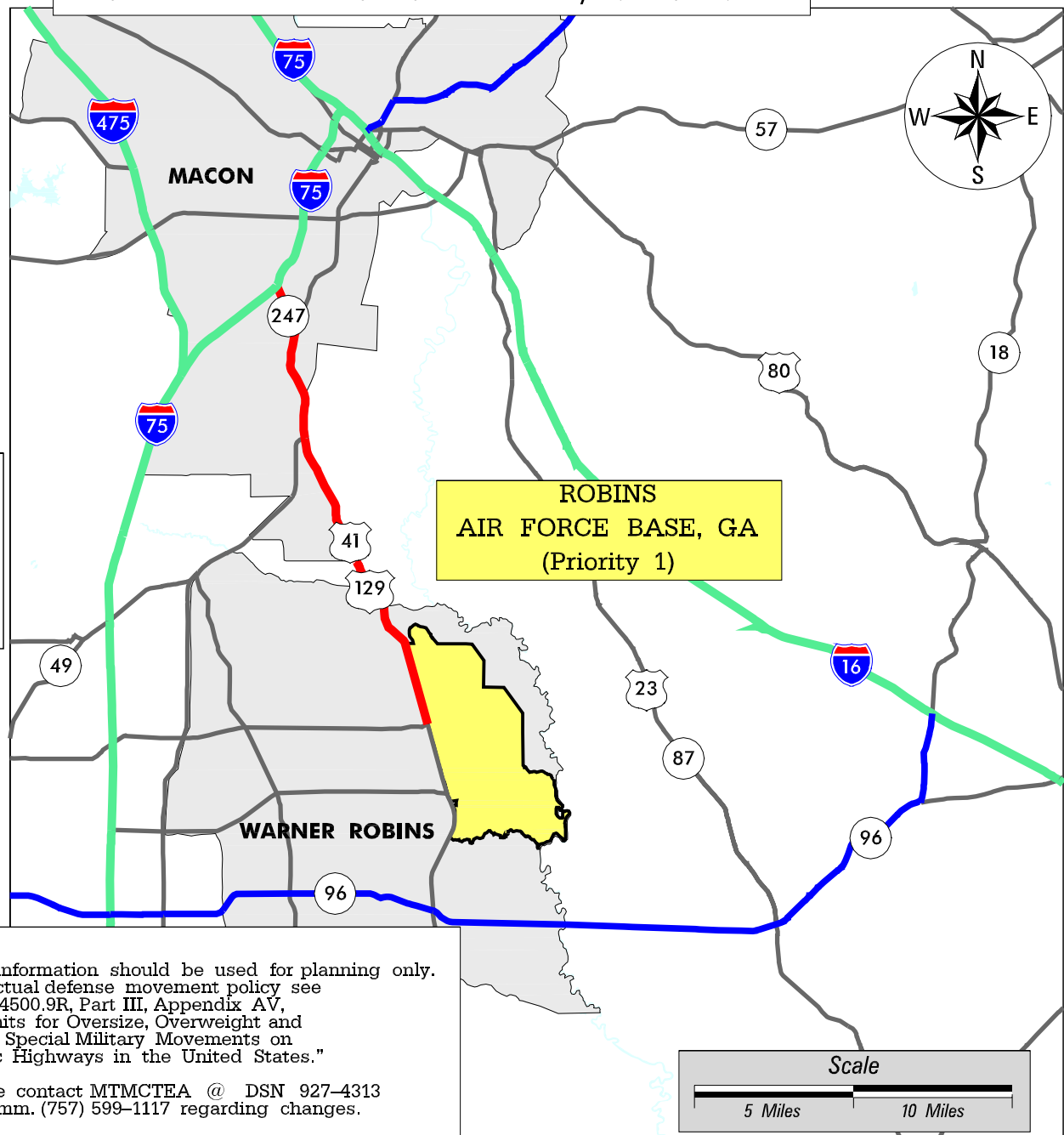
# ROBINS AIR FORCE BASE, GEORGIA

## LEGEND

-  INTERSTATE STRAHNET
-  NON-INTERSTATE STRAHNET
-  STRAHNET CONNECTOR
-  OTHER ROADS
-  INSTALLATION OF INTEREST
-  OTHER INSTALLATIONS & PORTS
-  URBAN AREAS

### ROUTE TO STRAHNET

US 129 N TO GA 247,  
GA 247 W TO I-75



**ROBINS  
AIR FORCE BASE, GA  
(Priority 1)**

**WARNER ROBINS**

This information should be used for planning only.  
For actual defense movement policy see  
DoD 4500.9R, Part III, Appendix AV,  
"Permits for Oversize, Overweight and  
Other Special Military Movements on  
Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313  
or Comm. (757) 599-1117 regarding changes.

**Last Updated: 21 FEB 2001**



# FORT BENNING, GEORGIA

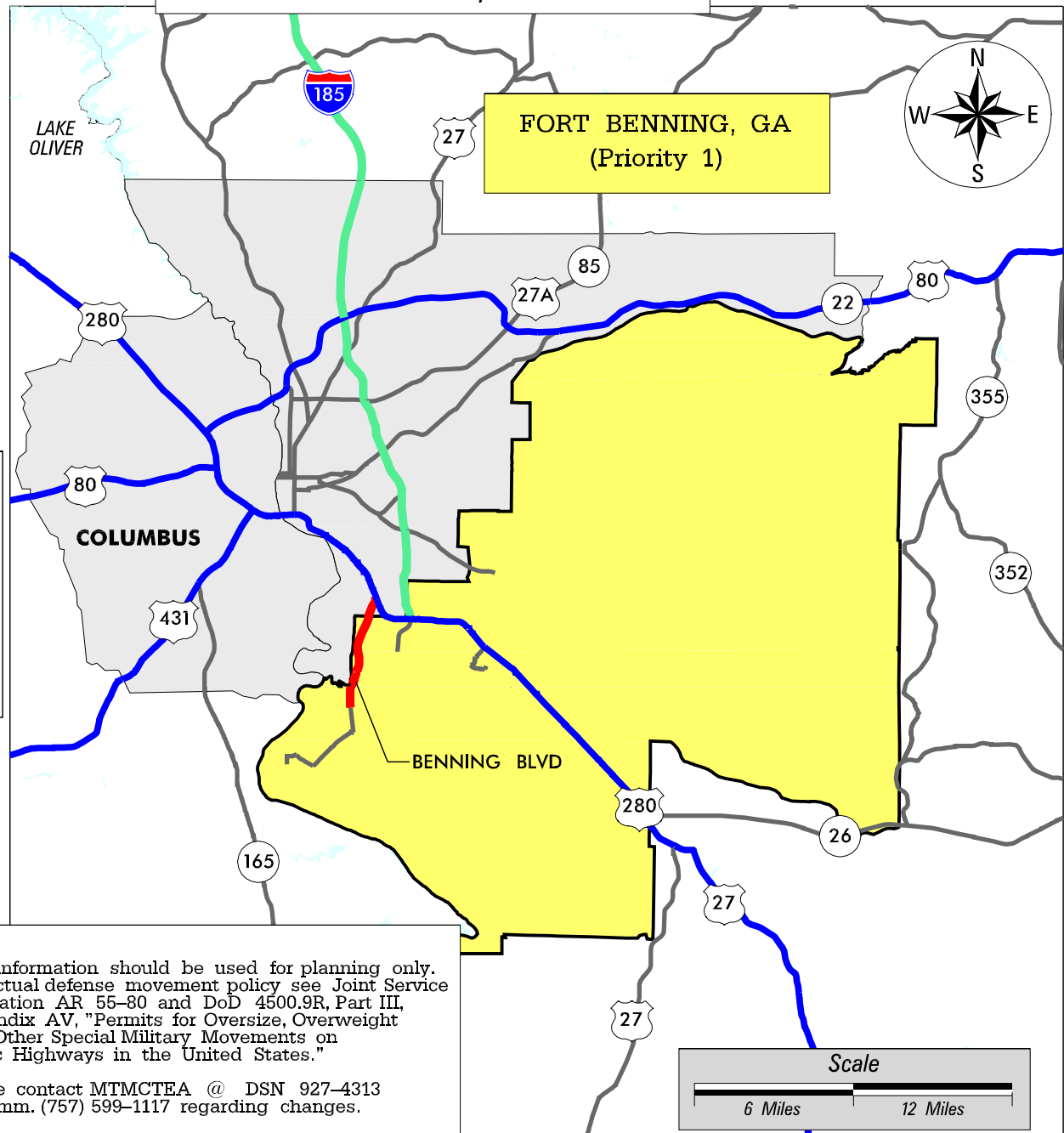
## LEGEND

- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- STRAHNET CONNECTOR
- OTHER ROADS
- INSTALLATION OF INTEREST
- OTHER INSTALLATIONS & PORTS
- URBAN AREAS

### ROUTE TO STRAHNET

**BENNING BLVD N TO US 280**

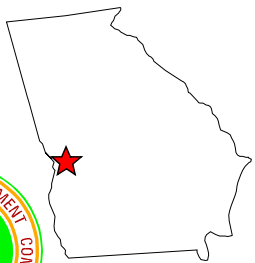
**NOTE:  
THE PRIMARY GATE USED FOR  
DEPLOYMENT HAS DIRECT  
ACCESS TO STRAHNET**



This information should be used for planning only. For actual defense movement policy see Joint Service Regulation AR 55-80 and DoD 4500.9R, Part III, Appendix AV, "Permits for Oversize, Overweight and Other Special Military Movements on Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313 or Comm. (757) 599-1117 regarding changes.

**Last Updated: 23 APRIL 2001**



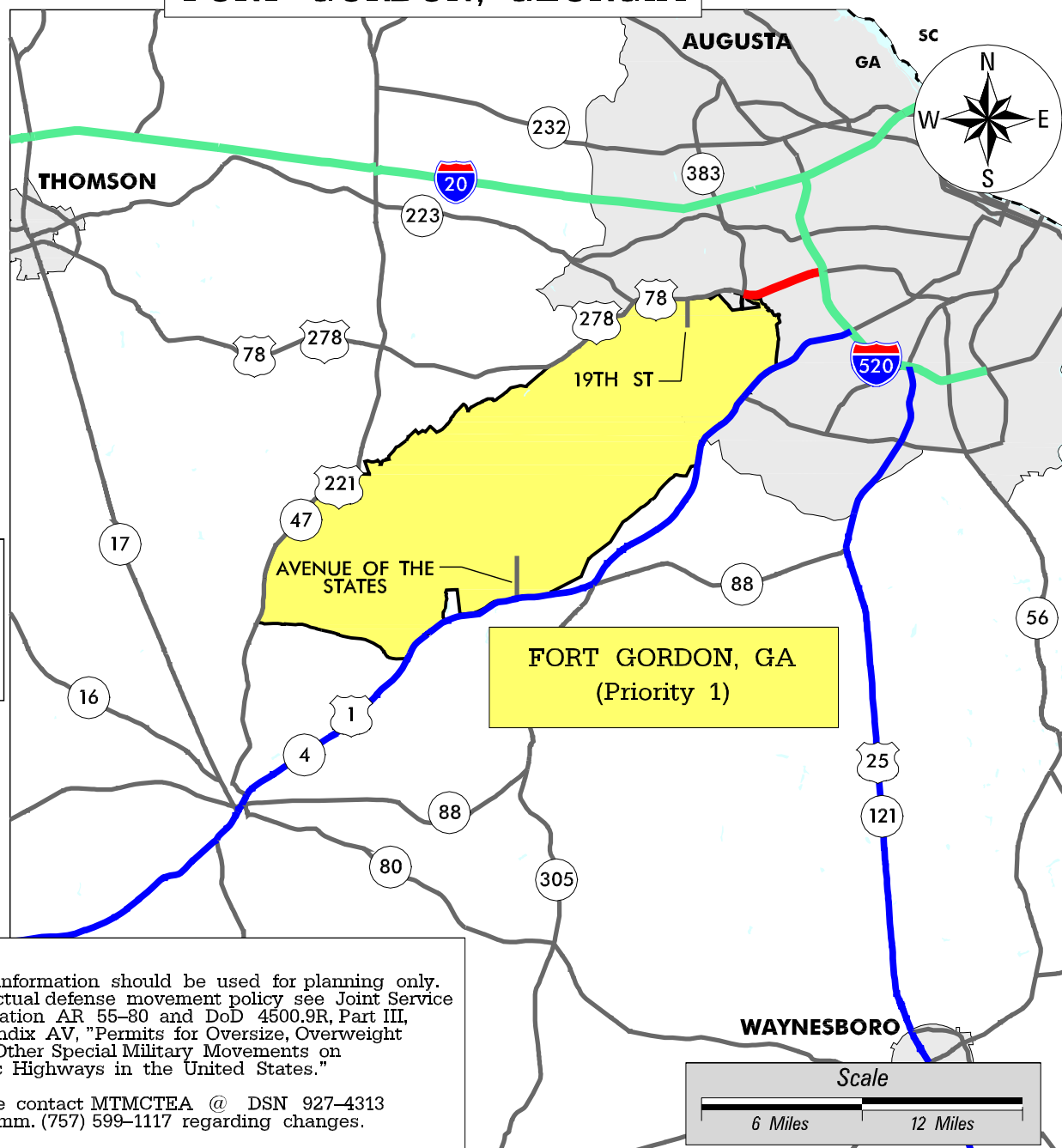
# FORT GORDON, GEORGIA

## LEGEND

- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- STRAHNET CONNECTOR
- OTHER ROADS
- INSTALLATION OF INTEREST
- OTHER INSTALLATIONS & PORTS
- URBAN AREAS
- - - STATE BOUNDARY

### ROUTE TO STRAHNET

US 78 / US 278 TO I-520



This information should be used for planning only. For actual defense movement policy see Joint Service Regulation AR 55-80 and DoD 4500.9R, Part III, Appendix AV, "Permits for Oversize, Overweight and Other Special Military Movements on Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313 or Comm. (757) 599-1117 regarding changes.

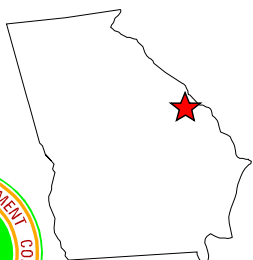
WAYNESBORO

Scale

6 Miles

12 Miles

Last Updated: 21 FEB 2001



# FORT STEWART, GEORGIA

## LEGEND

- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- STRAHNET CONNECTOR
- OTHER ROADS
- INSTALLATION OF INTEREST
- OTHER INSTALLATIONS & PORTS
- URBAN AREAS

### ROUTE TO STRAHNET

#### PRIMARY ROUTE:

GA 144 E TO I-95

#### SECONDARY ROUTE:

GA 119 S TO GA 38C,  
GA 38C E TO US 84

#### TERTIARY ROUTE:

GA 119 N TO US 280,  
US 280 E TO I-16

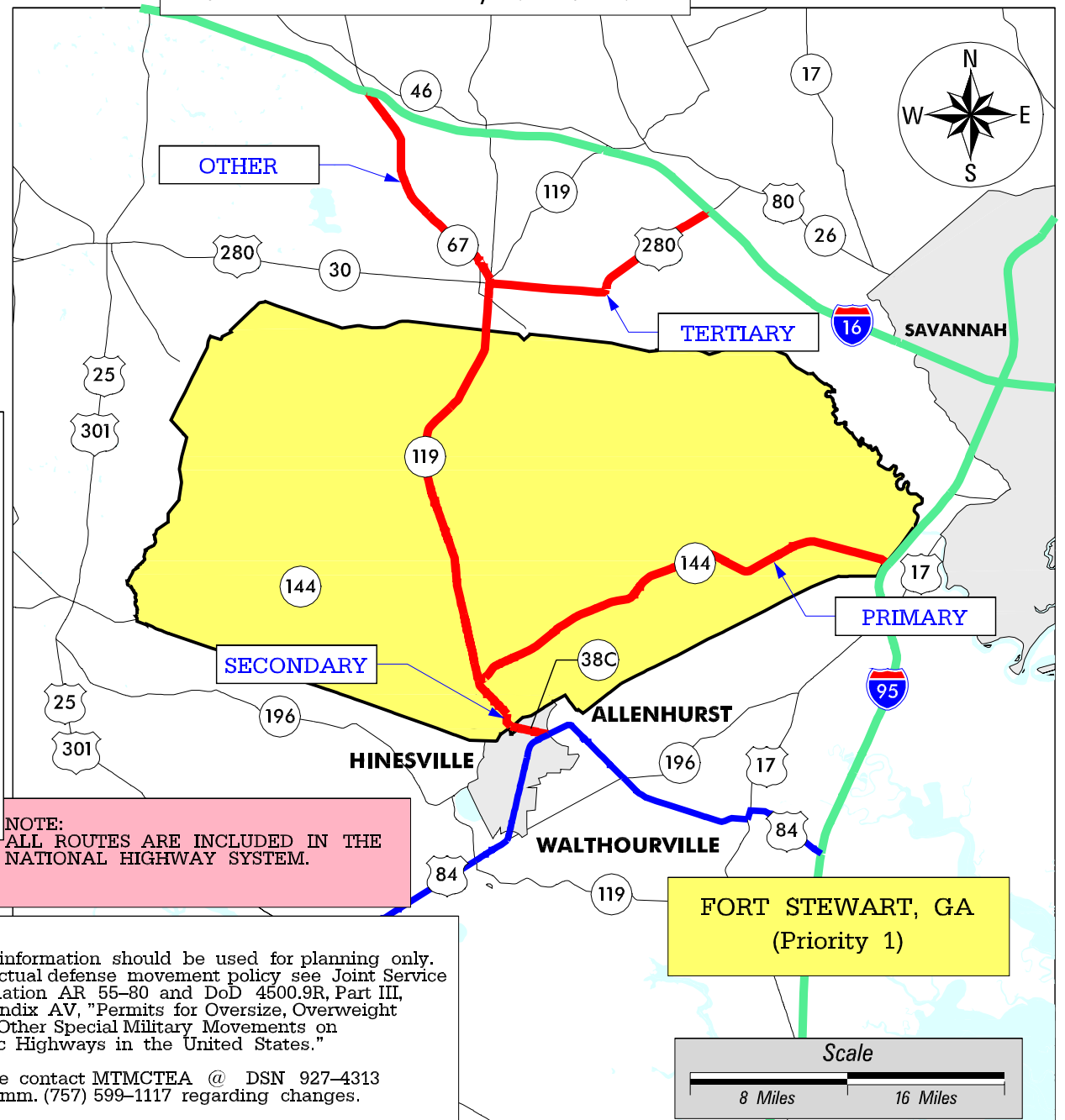
#### OTHER ROUTE:

(FROM FT BENNING, GA):  
I-16 E TO GA 67,  
GA 67 E TO GA 119,  
GA 119 S TO FT STEWART

NOTE:  
ALL ROUTES ARE INCLUDED IN THE  
NATIONAL HIGHWAY SYSTEM.

This information should be used for planning only.  
For actual defense movement policy see Joint Service  
Regulation AR 55-80 and DoD 4500.9R, Part III,  
Appendix AV, "Permits for Oversize, Overweight  
and Other Special Military Movements on  
Public Highways in the United States."








Please contact MTMCTEA @ DSN 927-4313  
or Comm. (757) 599-1117 regarding changes.



Last Updated: 21 FEB 2001

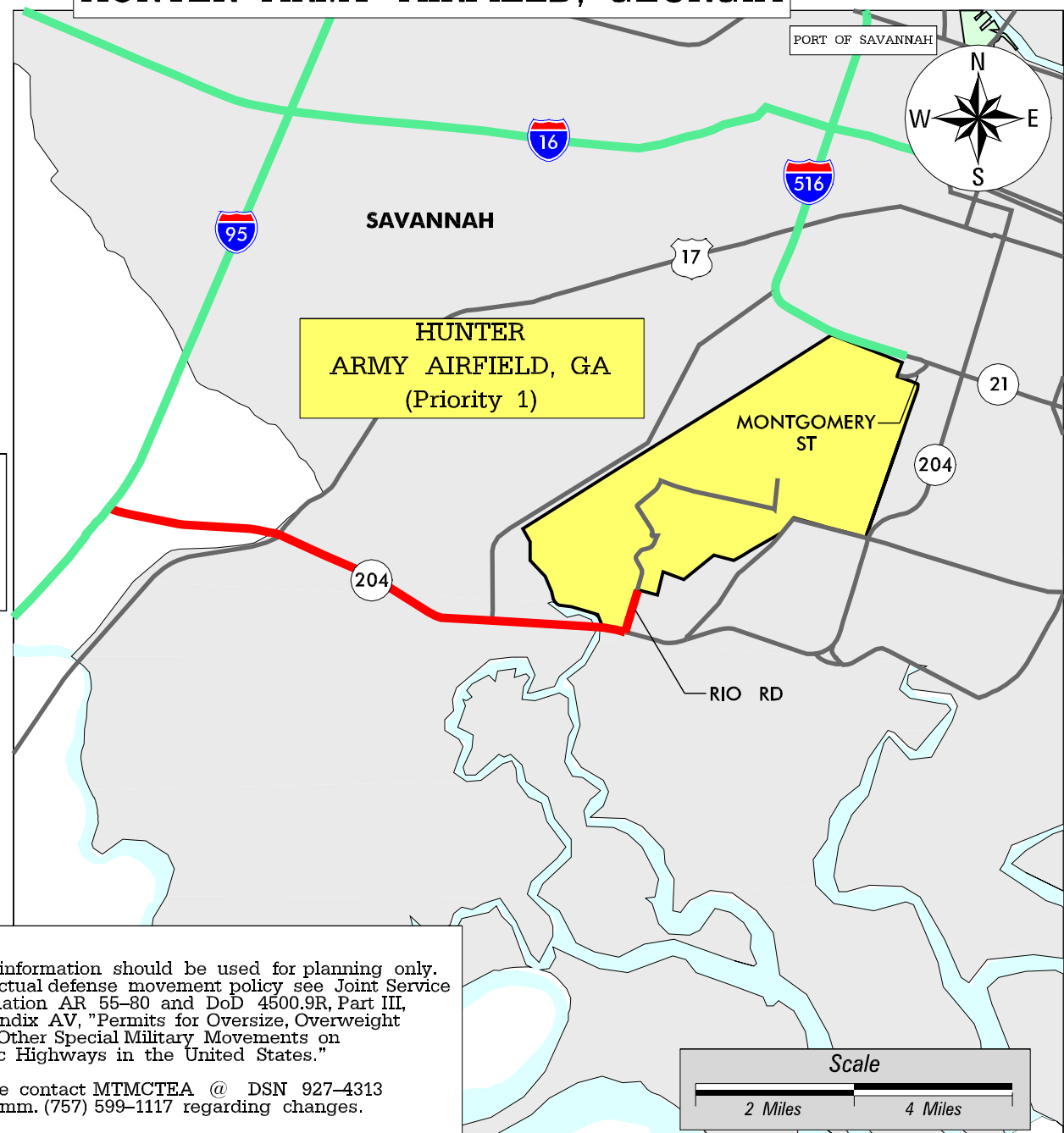
# HUNTER ARMY AIRFIELD, GEORGIA

## LEGEND

-  INTERSTATE STRAHNET
-  NON-INTERSTATE STRAHNET
-  STRAHNET CONNECTOR
-  OTHER ROADS
-  INSTALLATION OF INTEREST
-  OTHER INSTALLATIONS & PORTS
-  URBAN AREAS

## ROUTE TO STRAHNET

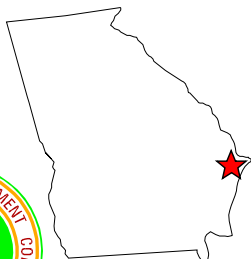
RIO RD S TO GA 204,  
GA 204 W TO I-95



This information should be used for planning only.  
For actual defense movement policy see Joint Service  
Regulation AR 55-80 and DoD 4500.9R, Part III,  
Appendix AV, "Permits for Oversize, Overweight  
and Other Special Military Movements on  
Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313  
or Comm. (757) 599-1117 regarding changes.

Last Updated: 21 FEB 2001



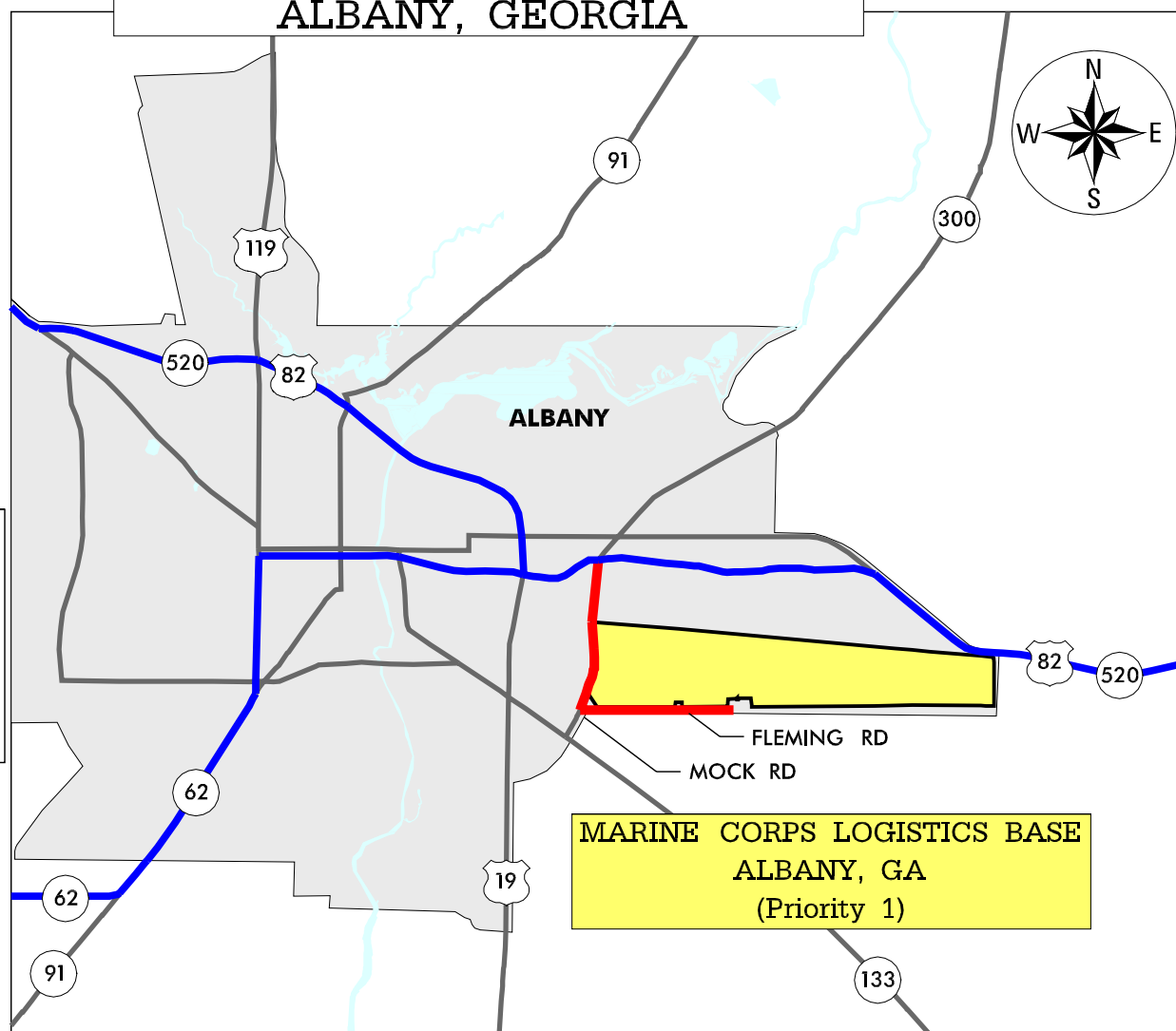
# MARINE CORPS LOGISTICS BASE ALBANY, GEORGIA

## LEGEND

- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- STRAHNET CONNECTOR
- OTHER ROADS
- INSTALLATION OF INTEREST
- OTHER INSTALLATIONS & PORTS
- URBAN AREAS

## ROUTE TO STRAHNET

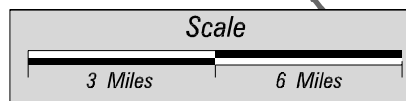
FLEMING RD W TO MOCK RD,  
MOCK RD N TO US 82 AND  
GA 300



**MARINE CORPS LOGISTICS BASE**  
**ALBANY, GA**  
(Priority 1)

This information should be used for planning only.  
For actual defense movement policy see Joint Service  
Regulation MCO 11210.2C and DoD 4500.9R, Part III,  
Appendix AV, "Permits for Oversize, Overweight  
and Other Special Military Movements on  
Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313  
or Comm. (757) 599-1117 regarding changes.



Last Updated: 21 FEB 2001





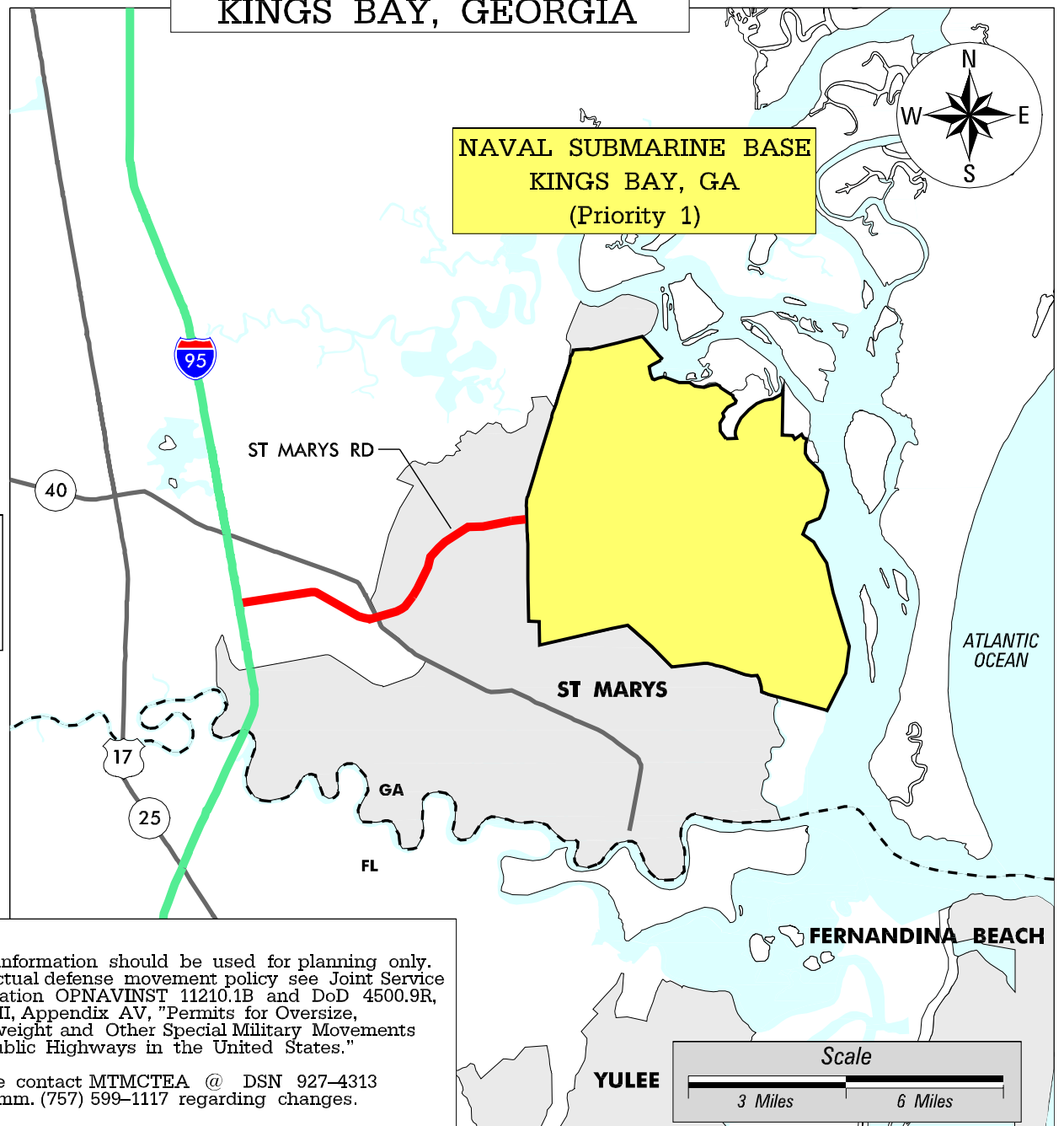
# NAVAL SUBMARINE BASE KINGS BAY, GEORGIA

## LEGEND

- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- STRAHNET CONNECTOR
- OTHER ROADS
- INSTALLATION OF INTEREST
- OTHER INSTALLATIONS & PORTS
- URBAN AREAS
- STATE BOUNDARY

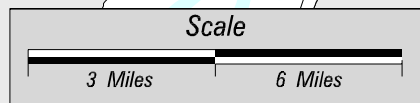
### ROUTE TO STRAHNET

ST MARYS RD W TO I-95



This information should be used for planning only. For actual defense movement policy see Joint Service Regulation OPNAVINST 11210.1B and DoD 4500.9R, Part III, Appendix AV, "Permits for Oversize, Overweight and Other Special Military Movements on Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313 or Comm. (757) 599-1117 regarding changes.



Last Updated: 21 FEB 2001



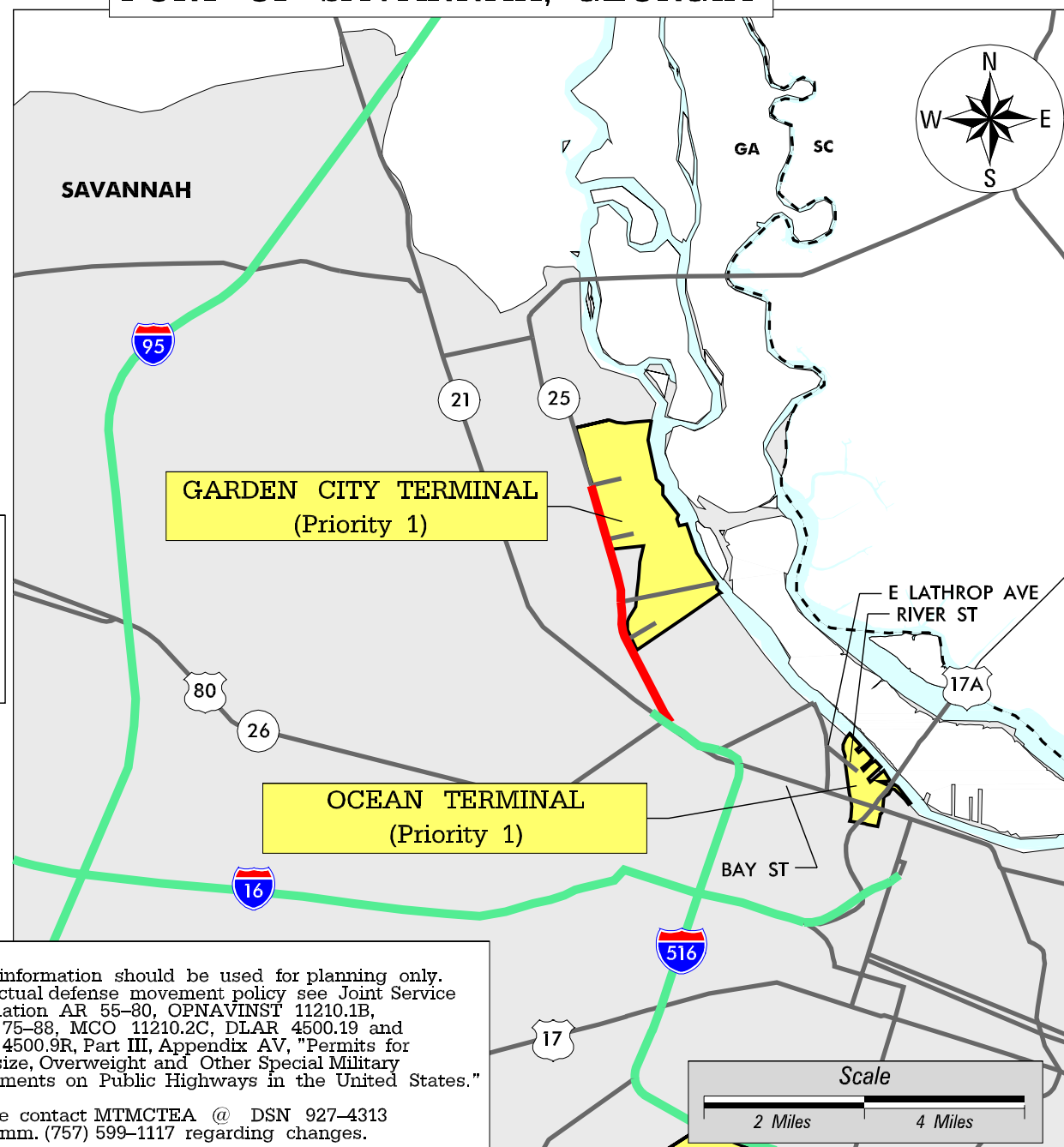
# PORT OF SAVANNAH, GEORGIA

## LEGEND

- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- STRAHNET CONNECTOR
- OTHER ROADS
- INSTALLATION OF INTEREST
- OTHER INSTALLATIONS & PORTS
- URBAN AREAS
- STATE BOUNDARY

### ROUTE TO PORT

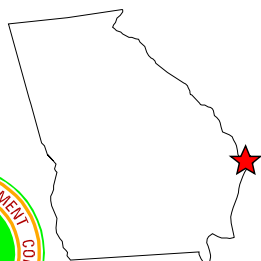
I-516 W TO GA 25,  
GA 25 N TO GARDEN  
CITY TERMINAL GATES



This information should be used for planning only. For actual defense movement policy see Joint Service Regulation AR 55-80, OPNAVINST 11210.1B, AFR 75-88, MCO 11210.2C, DLAR 4500.19 and DoD 4500.9R, Part III, Appendix AV, "Permits for Oversize, Overweight and Other Special Military Movements on Public Highways in the United States."








Please contact MTMCTEA @ DSN 927-4313 or Comm. (757) 599-1117 regarding changes.

Last Updated: 10 JAN 2002



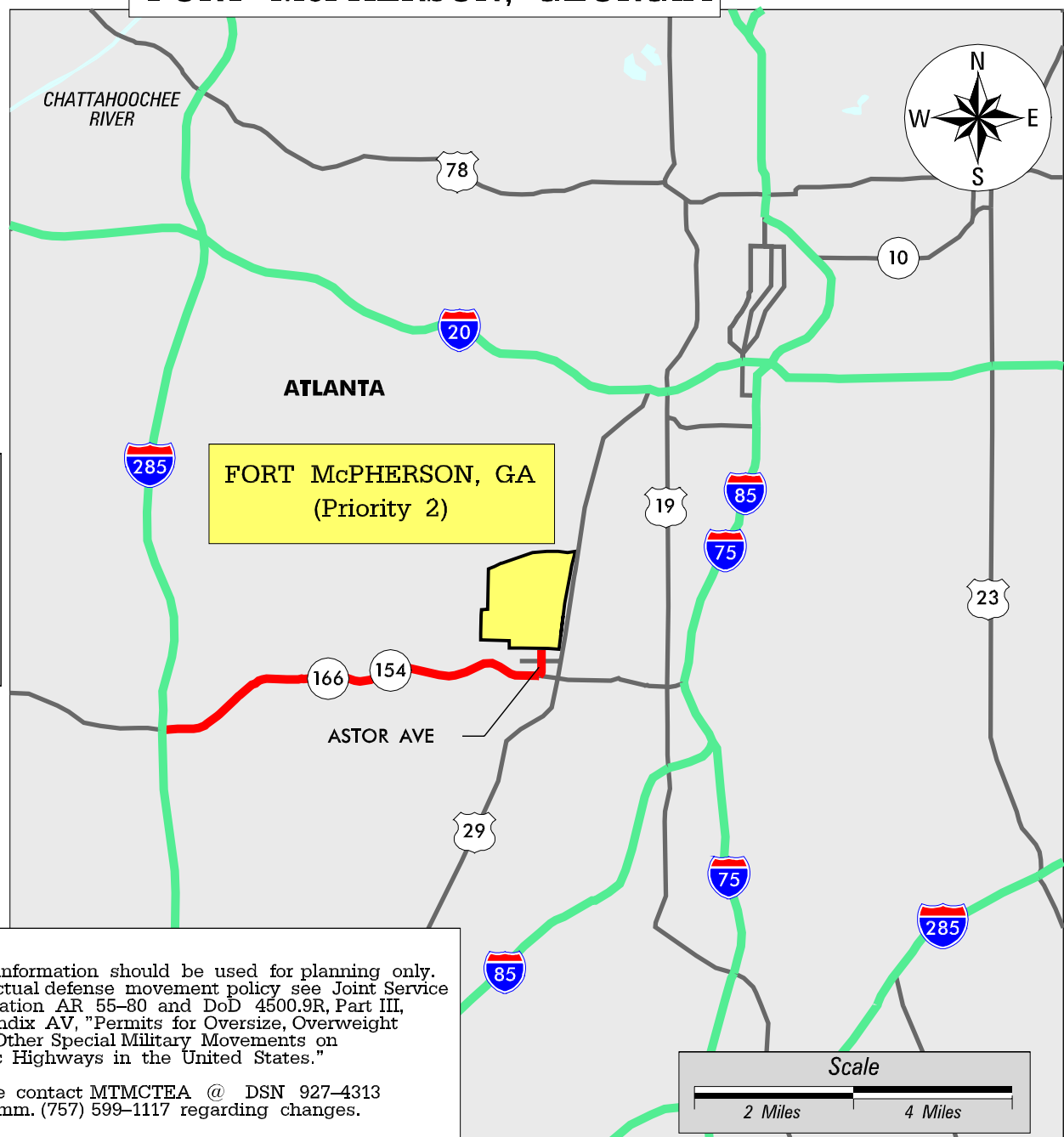
# FORT McPHERSON, GEORGIA

## LEGEND

-  INTERSTATE STRAHNET
-  NON-INTERSTATE STRAHNET
-  STRAHNET CONNECTOR
-  OTHER ROADS
-  INSTALLATION OF INTEREST
-  OTHER INSTALLATIONS & PORTS
-  URBAN AREAS

### ROUTE TO STRAHNET

ASTOR AVE S TO GA 166,  
GA 166 W TO I-285



This information should be used for planning only.  
For actual defense movement policy see Joint Service  
Regulation AR 55-80 and DoD 4500.9R, Part III,  
Appendix AV, "Permits for Oversize, Overweight  
and Other Special Military Movements on  
Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313  
or Comm. (757) 599-1117 regarding changes.

Last Updated: 21 FEB 2001



# NAVAL AIR STATION ATLANTA, GEORGIA

## LEGEND

- INTERSTATE STRAHNET
- NON-INTERSTATE STRAHNET
- STRAHNET CONNECTOR
- OTHER ROADS
- INSTALLATION OF INTEREST
- OTHER INSTALLATIONS & PORTS
- URBAN AREAS

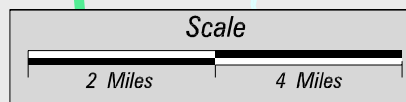
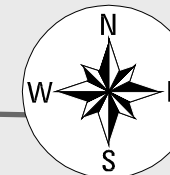
### ROUTE TO STRAHNET

ATLANTA RD N TO GA 280,  
GA 280 E TO I-75

NAVAL AIR STATION ATLANTA,  
GA  
(Priority 2)

This information should be used for planning only.  
For actual defense movement policy see Joint Service  
Regulation OPNAVINST 11210.1B and DoD 4500.9R,  
Part III, Appendix AV, "Permits for Oversize,  
Overweight and Other Special Military Movements  
on Public Highways in the United States."

Please contact MTMCTEA @ DSN 927-4313  
or Comm. (757) 599-1117 regarding changes.



Last Updated: 21 FEB 2001

# GEORGIA

## NON-INTERSTATE STRAHNET DESCRIPTION

HIGHWAY ROUTE NUMBERS	ROUTE DESCRIPTION	APPROX. MILEAGE	INSTALLATIONS ALONG THE CORRIDOR
US 80, GA 96	Take US 80 from the Alabama/Georgia state border to GA 96 in Geneva. Then take GA 96 past I-75, to I-16 (southeast of Macon).	105	Ft. Benning, Robins AFB
US 129, GA 49, GA 24, GA 88, US 1	Take US 129 from I-16 in Macon, to GA 49 in Macon. Then take GA 49 to GA 24 east of Milledgeville. Then take GA 24 to GA 88 at Sandersville. Then take GA 88 to US 1. Then take US 1 to I-520 in Augusta.	116	Ft. Gordon
US 25	Take US 25 from I-520 in Augusta, using US 25 Bypass on the west side of Statesboro, to I-16.	84	None
US 280, GA 520, US 82	Take US 280 from the Alabama/Georgia state border to GA 520 in Richland. Then take GA 520 to US 82 in Dawson. Then take US 82 to I-95 in Brunswick.	248	MCLB Albany
GA 62	Take GA 62 from AL 52 at the Alabama/Georgia state border, to US 82 in Albany.	68	None
US 84	Take US 84 from US 82 in Waycross, to I-95 about 23 miles south of Savannah.	81	None

**Last Updated: 2-Feb-00**



# **APPENDIX D**

## **NCPD PROJECT WORKSHEETS**



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

### NEED AND PURPOSE:

The purpose of the project is to improve traffic operations on SR 96 by grade separating the intersection of SR 247 and Norfolk Southern Railroad. The described location is on STRAHNET and, therefore, is a freight focused corridor. The current AADT is 10,900 and the current volume to capacity ratio is .76. With no improvement, the corridor is anticipated to have an AADT of 18,749 and a volume to capacity ratio of 1.26 by 2025, indicating congestion along the corridor. Therefore, improvements are necessary to accommodate future growth in traffic. Reduced congestion will create a safer environment for freight movement through the corridor. The grade separation will promote regional continuity by eliminating delays currently encountered due to railroad and SR 247 at-grade crossing.

County	Houston
Map Code	NCPD 1
Route #	SR 96/ SR 247 & NFS RR
GDOT District	3
Cong. District	3
RDC	Middle Georgia
Length	Intersection
Mileposts	
From: NFS RR	To: SR 247

Year	1998	2025	Access Control	From: No Control To: Partial Control	STRAHNET	Yes
Traffic Vol.:	10,900	18,749	% Increase in Capacity			
Truck %:	2%	2%	% Increase in Travel Speed			
No. of Lanes	2	2	% Shift in Non-Freight			

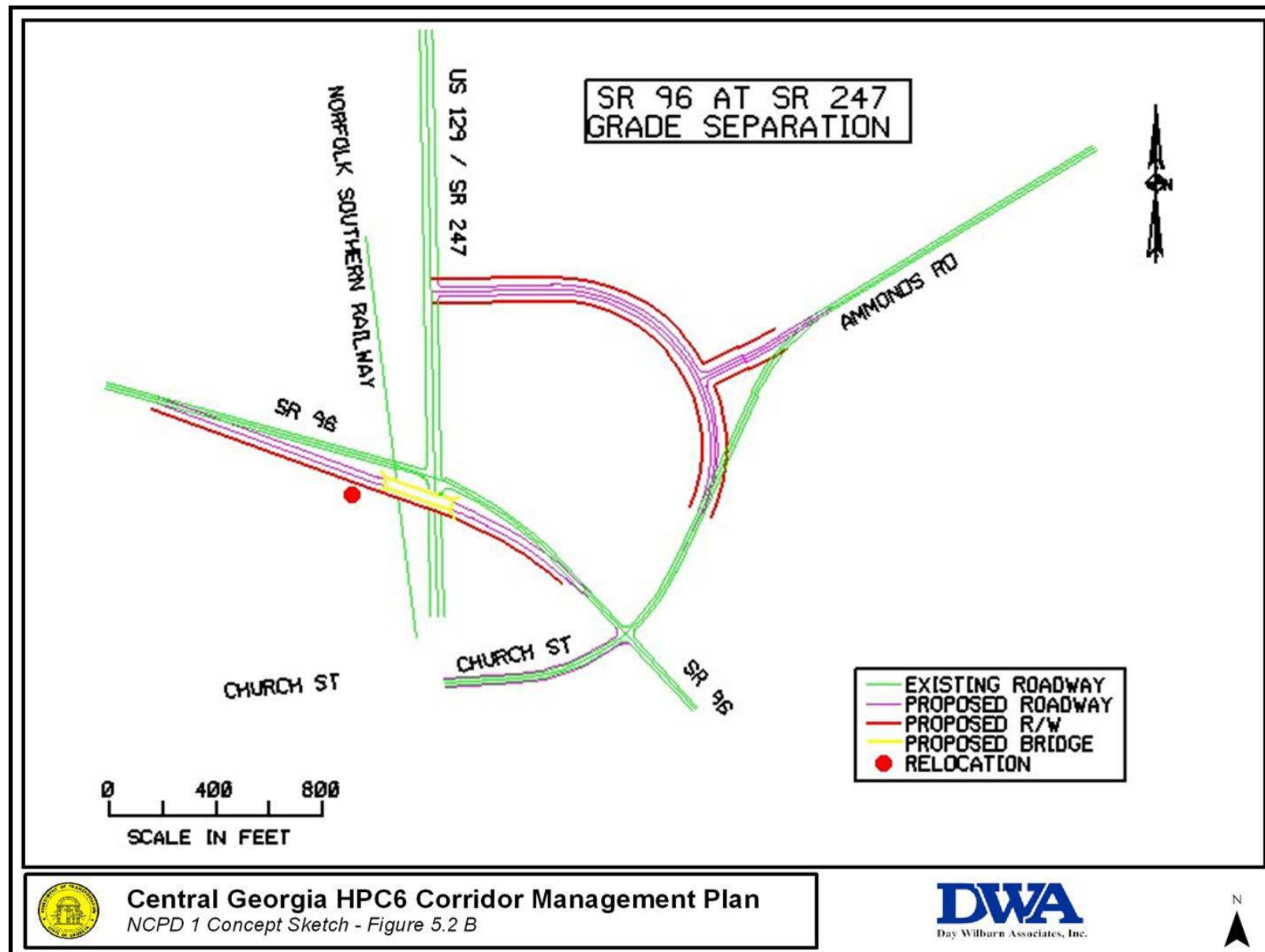
### PROJECT DESCRIPTION:

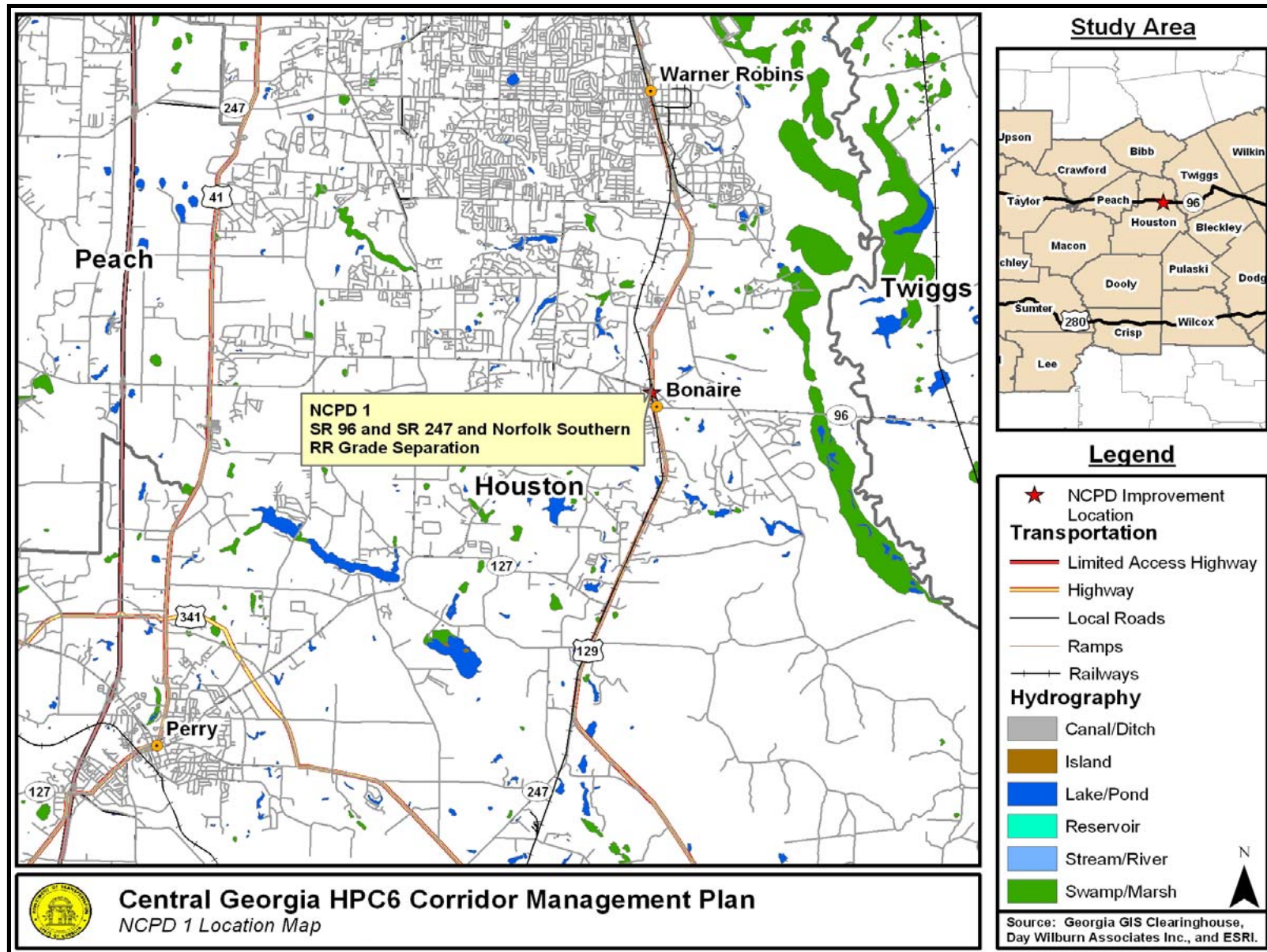
Construct a two-lane grade separation at SR 96 and SR 247/Norfolk Southern Railroad.

### COST ESTIMATE:

Project Phase	Funding Source	Total Cost Estimate
Planning	NCPD	
Preliminary Eng.	NCPD	\$393,091
Right-of-Way	NCPD	\$16,804,480
Utilities	Local	\$327,576
Construction	NCPD	\$3,603,336
<b>Project Cost</b>		<b>\$21,128,483</b>







## Project Definition Initial Cost Estimate

<b>County</b>	Houston
<b>Route</b>	SR 96
<b>Location Description</b>	SR 96 and SR 247/ Norfolk Southern Railroad
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/23/02

### Recommended Solution

SR 96 and SR 247/ Norfolk Southern Railroad Grade Separation

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Part 4 - SR 247 &amp; RR Grade Separation</u>	0.8		\$2,527,200	<b>\$2,021,760</b>
Source of Unit Cost	FDOT 2000 Transportation Costs		\$1,800,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			
Added Difficulty Factor	staging construction under traffic: multiply by factor of 1.3			
Subtotal				

### Bridges

	Number	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Bridge over SR 247 & RR		300	53	15,900	\$60	<b>\$954,000</b>

### Signals

SR 247 & RR Grade Separation	3				\$100,000	<b>\$300,000</b>
------------------------------	---	--	--	--	-----------	------------------

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
Land						
commercial	0.5	120	316,800	7.27	\$275,000	\$2,000,000
residential	0.3	120	190,080	4.36	\$55,000	<u>\$240,000</u>
subtotal						\$2,240,000
Improvements Taken						\$1,750,000
Relocation						\$250,000
Damages						<u>\$600,000</u>
Subtotal						\$4,840,000
<u>Net Cost</u>						\$4,840,000
<u>Scheduling Contingency</u>						\$2,662,000
<u>Admn/Court Cost</u>						\$4,501,200
<u>Inflation Factor</u>						\$4,801,280
<u>Right of Way Total</u>						<b>\$16,804,480</b>

### Summary

Highway	\$2,021,760	
Bridges	\$954,000	
Signals	\$300,000	
Construction Subtotal	\$3,275,760	
CEI	\$327,576	10% of construction subtotal
Construction Estimate	\$3,603,336	construction subtotal plus CEI
Preliminary Engineering	\$393,091	12% of construction subtotal includes 1% concept, 1% environmental document, 10% design
Right of Way	\$16,804,480	
Utility Relocation	\$327,576	10% of construction subtotal
<b>Total Cost</b>	<b>\$21,128,483</b>	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

### NEED AND PURPOSE:

The purpose of the project is to improve traffic operations on SR 96 by adding turn lanes from West of Kersey Road to East of Cartwright Drive and at Old Perry Road. The described location is on STRAHNET and, therefore, is a freight focused corridor. The current AADT is 10,900 and the current volume to capacity ratio is .76. With no improvement, the corridor is anticipated to have an AADT of 18,749 and a volume to capacity ratio of 1.26 by 2025, indicating congestion along the corridor. Therefore, improvements are necessary to accommodate future growth in traffic. Reduced congestion will create a safer environment for freight movement through the corridor. The turning lanes will promote interregional continuity and safety by removing turning vehicles from the through lanes.

County	Houston
Map Code	NCPD 2
Route #	SR 96
GDOT District	3
Cong. District	3
RDC	Middle Georgia
Length	.4 miles
Mileposts	
From: Kersey Road	To: Cartwright and Old Perry

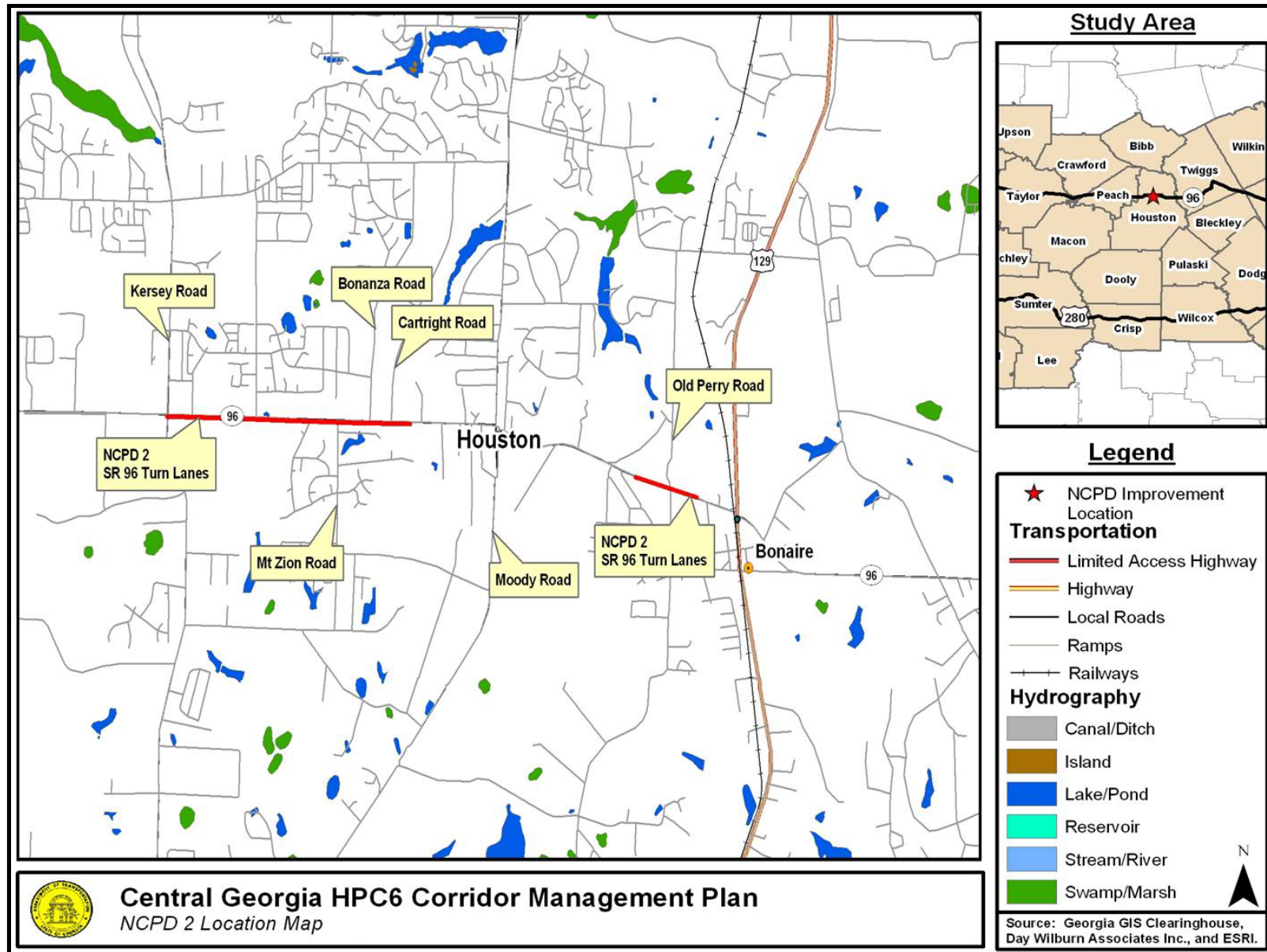
Year	1998	2025	Access Control	From: No Control To: No Control	STRAHNET	Yes
Traffic Vol.:	10,900	18,749	% Increase in Capacity			
Truck %:	2%	2%	% Increase in Travel Speed			
No. of Lanes	2	2	% Shift in Non-Freight			

### PROJECT DESCRIPTION:

Provide turn lanes on SR 96 from West of Kersey Road to East of Cartwright Drive and at Old Perry Road.

### COST ESTIMATE:

Project Phase	Funding Source	Total Cost Estimate
Planning	NCPD	
Preliminary Eng.	NCPD	\$61,667
Right-of-Way	NCPD	\$0
Utilities	Local	\$61,667
Construction	NCPD	\$678,341
<b>Project Cost</b>		<b>\$801,676</b>





## Project Definition Initial Cost Estimate

**County** Houston  
**Route** SR 96  
**Location Description** SR 96 from Houston Lake Road to US 129  
**Prepared By** David Low  
**Date Last Updated** 12/23/02

### Recommendation Description

Short Range (2003-2008): Provide two lanes with left turn lanes from west of Kersey Road (Peach Blossom Road) to east of Cartwright Drive and at Old Perry Road.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
Left turn lane				
from Kersey Rd (Peach Blossom Rd) to Cartwright Rd	0.40		\$1,163,536	\$465,414
Old Perry Road	0.13		\$1,163,536	<u>\$151,260</u>
Subtotal				\$616,674
Source of Unit Cost		GDOT 2002 Transportation Costs	\$1,163,536	
Year		2002		

### Bridges

Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
0			\$60	\$0

### Signals

none

### ITS

none

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
Land						
commercial			0	0.00	\$275,000	\$0
residential			0	0.00	\$75,000	<u>\$0</u>
subtotal						\$0
Improvements Taken						\$0
Relocation						\$0
Damages						<u>\$0</u>
Subtotal						\$0

<u>Net Cost</u>	\$0
<u>Scheduling Contingency</u>	\$0
<u>Admn/Court Cost</u>	\$0
<u>Inflation Factor</u>	<u>\$0</u>
<u>Right of Way Total</u>	<b>\$0</b>

### Summary

Highway	\$616,674	
Bridges	\$0	
Signals	\$0	
ITS		
Construction Subtotal	\$616,674	
CEI	\$61,667	10% of construction subtotal
Construction Estimate	\$678,341	construction subtotal plus CEI
Preliminary Engineering	\$61,667	14% of construction subtotal includes 1% concept, 1% environmental document, 12% design
Right of Way	\$0	
Utility Relocation	\$61,667	10% of construction subtotal
<b>Total Cost</b>	<b>\$801,676</b>	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

### NEED AND PURPOSE:

The purpose of the project is to improve traffic operations on SR 96 by implementing intersection improvements at SR 96 and Moody Road. The described location is on STRAHNET and, therefore, is a freight focused corridor. The current AADT is 10,900 and the current volume to capacity ratio is .76. With no improvement, the corridor or is anticipated to have an AADT of 18,749 and a volume to capacity ratio of 1.26 by 2025, indicating congestion along the corridor. Therefore, improvements are necessary to accommodate future growth in traffic. Reduced congestion will create a safer environment for freight movement through the corridor. The improvement will promote interregional continuity and safety by removing turning vehicles from the through lanes.

County	Houston
Map Code	NCPD 3
Route #	SR 96/ Moody Road
GDOT District	3
Cong. District	3
RDC	Middle Georgia
Length	Intersection
Mileposts	
From:	To:

Year	1998	2025	Access Control	From: No Control To: No Control	STRAHNET	Yes
Traffic Vol.:	10,900	18,749	% Increase in Capacity			
Truck %:	2%	2%	% Increase in Travel Speed			
No. of Lanes	2	2	% Shift in Non-Freight			

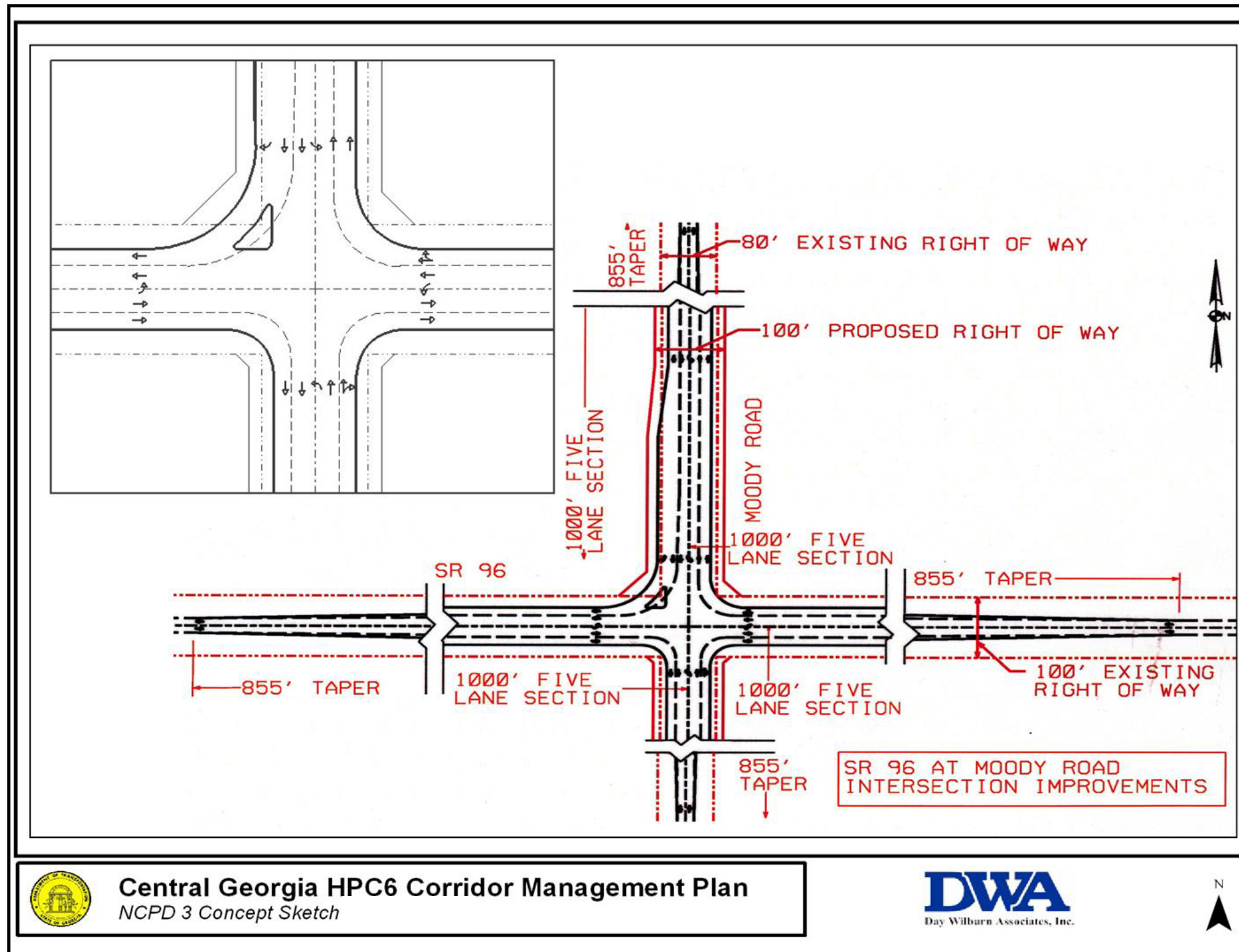
### PROJECT DESCRIPTION:

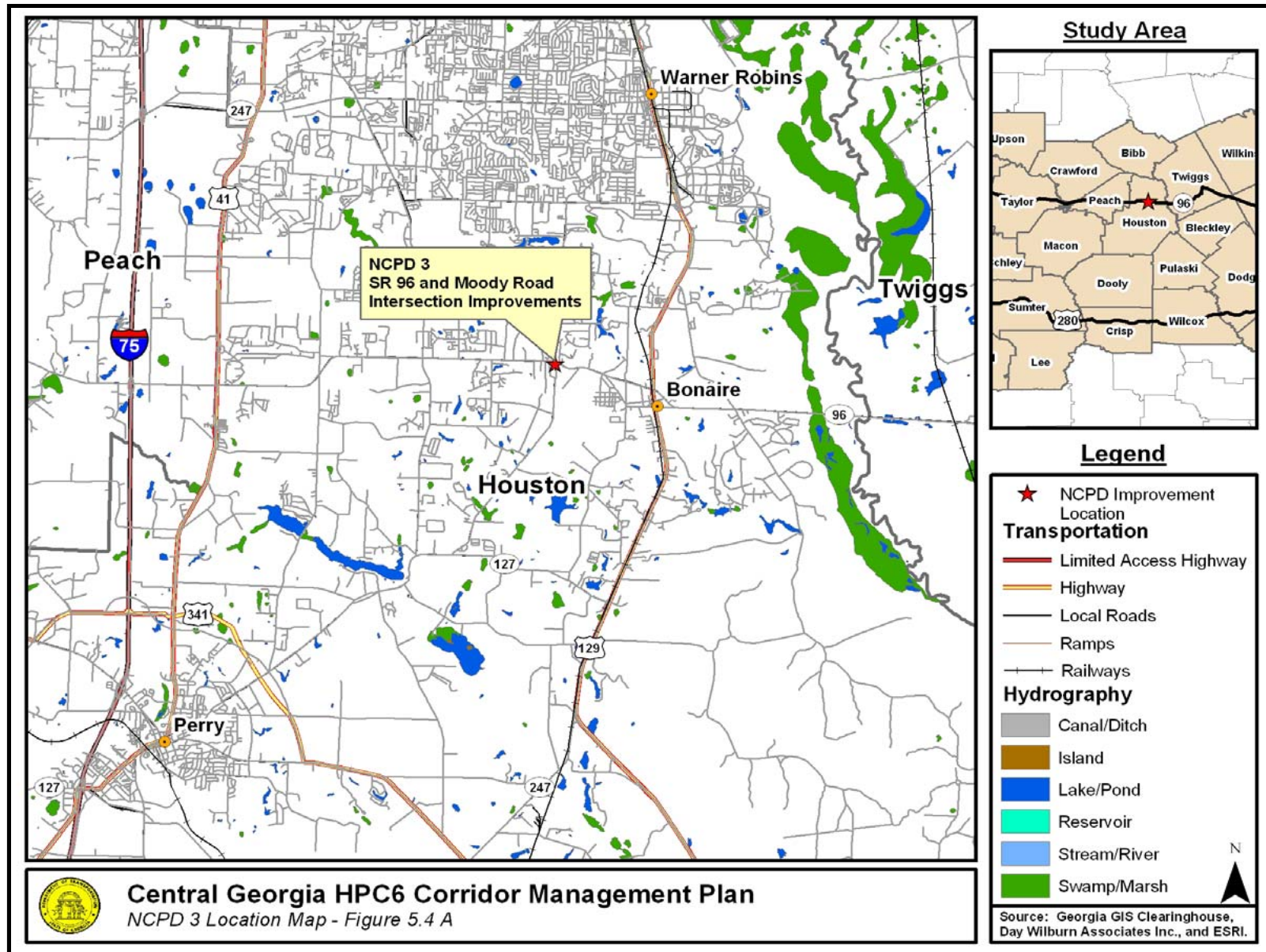
Implement intersection improvements at SR 96 and Moody Road.

### COST ESTIMATE:

Project Phase	Funding Source	Total Cost Estimate
Planning	NCPD	
Preliminary Eng.	NCPD	\$350,109
Right-of-Way	NCPD	\$4,204,276
Utilities	Local	\$350,109
Construction	NCPD	\$3,851,202
<b>Project Cost</b>		<b>\$8,755,697</b>







## Project Definition Initial Cost Estimate

<b>County</b>	Houston
<b>Route</b>	SR 96
<b>Location Description</b>	SR 96 at Moody Road Intersection Improvement
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/23/02

### Recommendation Description

Short Range (2003-2008):

Provide intersection improvement at SR 96 and Moody Road.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
Intersection Improvement Moody Road	1.2		\$2,834,244	\$3,401,093
Source of Unit Cost		FDOT 2000 Transportation Costs	\$2,624,300	
Year		2000		
Adjustment to 2002		4% per year is growth factor of 1.08		

### Bridges

Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
0			\$60	\$0

### Signals

signal modification	1		\$100,000	\$100,000
---------------------	---	--	-----------	-----------

### ITS

none

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Intersection Improvement						
<u>Moody Road</u>						
Land						
commercial	0.6	24	76,032	1.75	\$275,000	\$480,000
residential	0.6	24	76,032	1.75	\$75,000	<u>\$130,909</u>
subtotal						\$610,909
Improvements Taken						\$200,000
Relocation						\$125,000
Damages						<u>\$275,000</u>
Subtotal						\$1,210,909
<u>Net Cost</u>						\$1,210,909
<u>Scheduling Contingency</u>						\$666,000
<u>Admn/Court Cost</u>						\$1,126,145
<u>Inflation Factor</u>						<u>\$1,201,222</u>
<u>Right of Way Total</u>						<b>\$4,204,276</b>

### Summary

Highway	\$3,401,093	
Bridges	\$0	
Signals	\$100,000	
ITS		
Construction Subtotal	\$3,501,093	
CEI	\$350,109	10% of construction subtotal
Construction Estimate	\$3,851,202	construction subtotal plus CEI
Preliminary Engineering	\$350,109	14% of construction subtotal includes 1% concept, 1% environmental document, 12% design
Right of Way	\$4,204,276	
Utility Relocation	\$350,109	10% of construction subtotal
<b>Total Cost</b>	<b>\$8,755,697</b>	



# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

### NEED AND PURPOSE:

The purpose of the project is to improve traffic operations on SR 96 by grade separating SR 96 and the Norfolk Southern Railroad east of the Ocmulgee River. The described location is on STRAHNET and, therefore, is a freight focused corridor. The current AADT is 10,900 and the current volume to capacity ratio is .76. With no improvement, the corridor is anticipated to have an AADT of 18,749 and a volume to capacity ratio of 1.26 by 2025, indicating congestion along the corridor. Therefore, improvements are necessary to accommodate future growth in traffic. Reduced congestion will create a safer environment for freight movement through the corridor. The grade separation will promote interregional continuity by eliminating delays currently encountered due to the Norfolk Southern at-grade crossing.

County	Twiggs
Map Code	NCPD 4
Route #	SR 96/ NFS RR
GDOT District	3
Cong. District	3
RDC	Middle Georgia
Length	Intersection
Mileposts	
From:	To:

Year	1998	2025	Access Control	From: No Control To: Partial Control	STRAHNET	Yes
Traffic Vol.:	10,900	18,749	% Increase in Capacity			
Truck %:	2%	2%	% Increase in Travel Speed			
No. of Lanes	2	2	% Shift in Non-Freight			

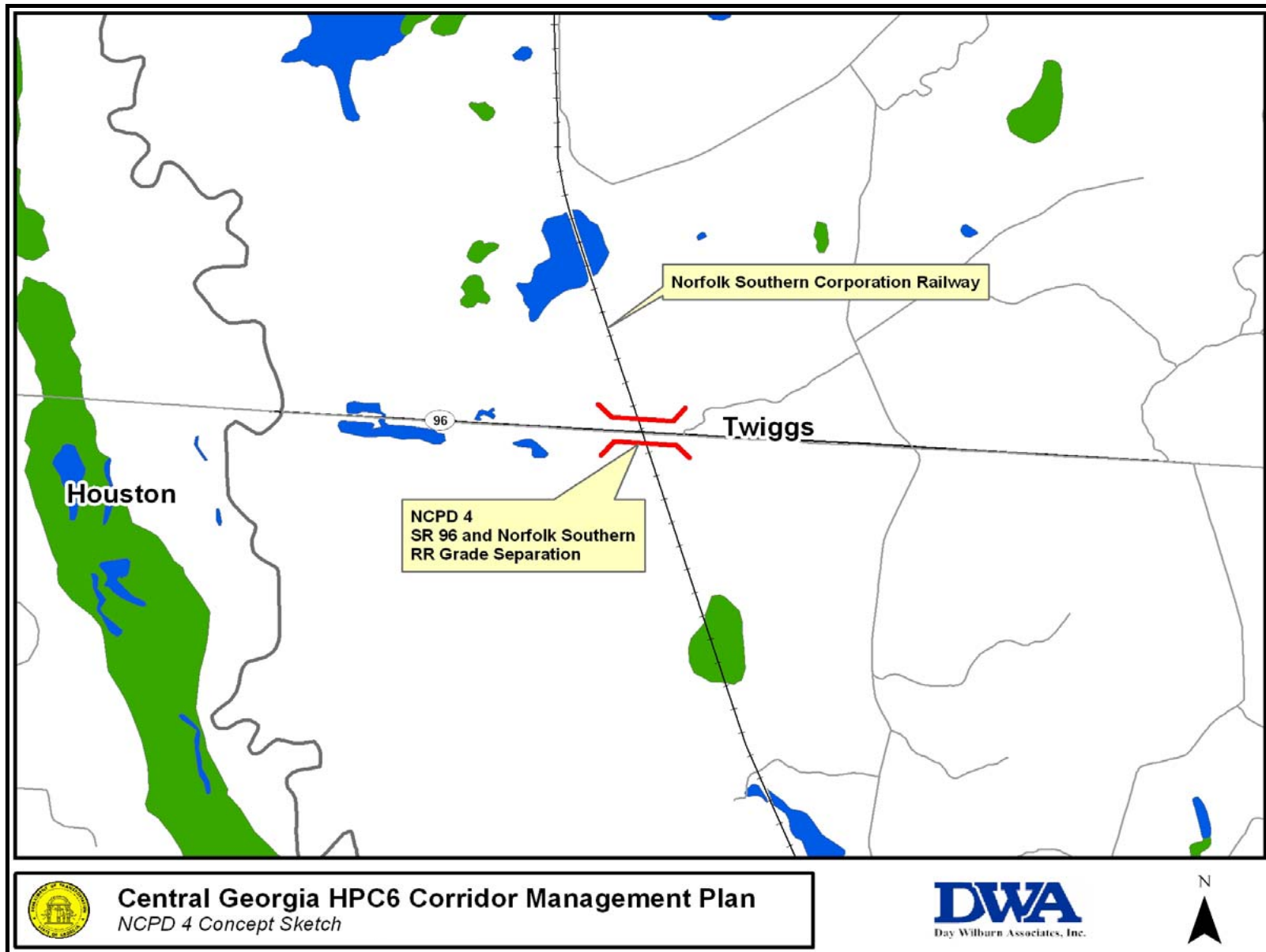
### PROJECT DESCRIPTION:

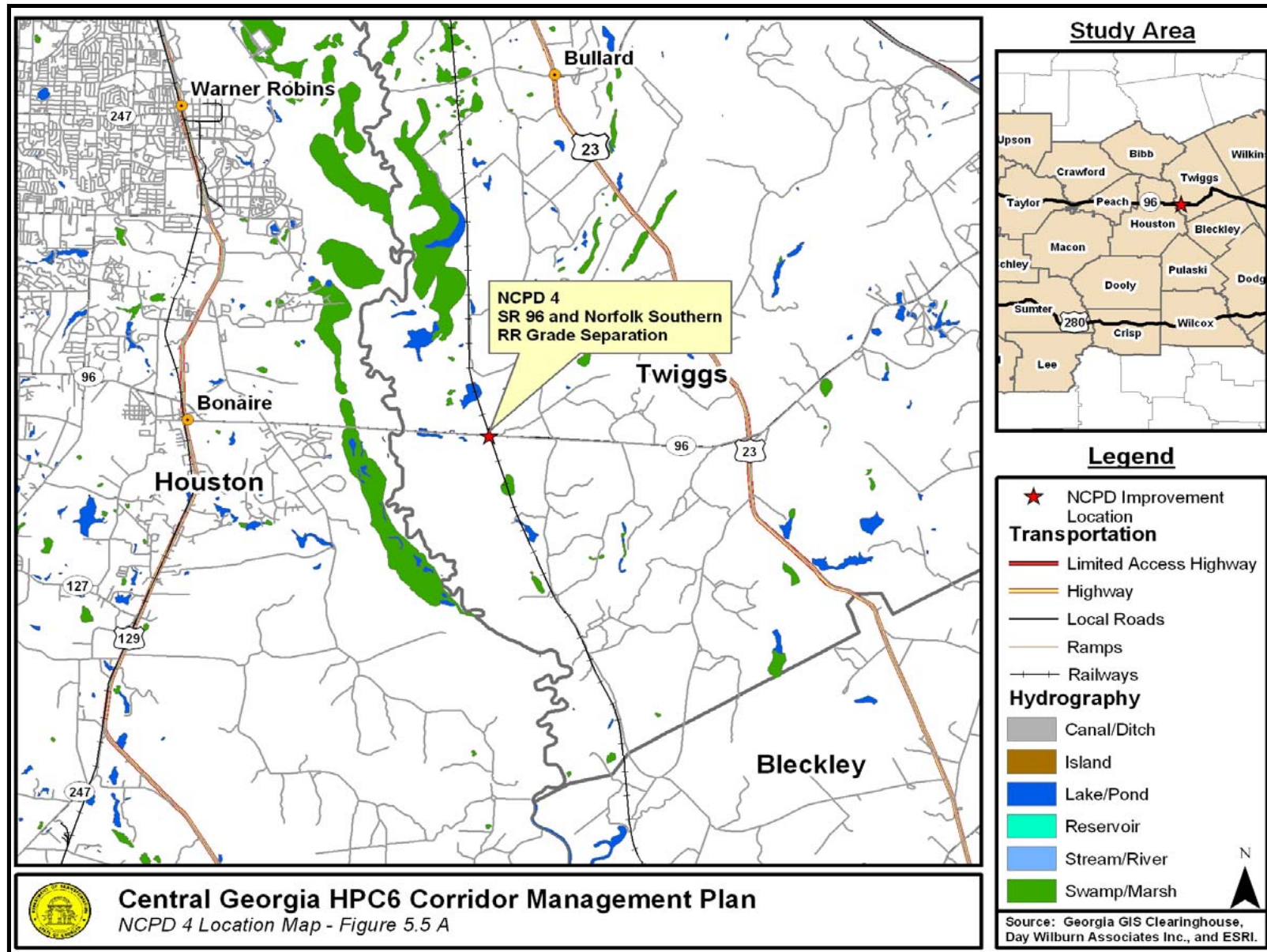
Construct a two-lane grade separation at SR 96 and Norfolk Southern Railroad.

### COST ESTIMATE:

Project Phase	Funding Source	Total Cost Estimate
Planning	NCPD	
Preliminary Eng.	NCPD	\$173,040
Right-of-Way	NCPD	\$126,255
Utilities	Local	\$34,608
Construction	NCPD	\$1,730,040
<b>Project Cost</b>		<b>\$2,237,343</b>







**Central Georgia HPC6 Corridor Management Plan**  
NCPD 4 Location Map - Figure 5.5 A

## Project Definition Initial Cost Estimate

<b>County</b>	Twiggs
<b>Route</b>	SR 96
<b>Location Description</b>	SR 96 Railroad Grade Separation in Twiggs County
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/23/02

### Recommendation Description

Construct two lane grade separation at RR east of Ocmulgee River in Twiggs County.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
<u>Construct two lane grade separation at RR east of Ocmulgee River in Twiggs County.</u>				
	0.3		\$3,888,000	\$1,166,400
Source of Unit Cost	FDOT 2000 Transportation Costs		\$3,600,000	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Bridge over RR in Twiggs County	200	47	9,400	\$60	\$564,000

### Signals

none

### ITS

none

### Right of Way

	Length (mi)	Width	Sq Ft	Acres	Unit Cost	Total
<u>Urban</u>						
Land						
commercial			0	0.00	\$275,000	\$0
industrial					\$250,000	
residential					\$55,000	
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	0.3	100	158,400	3.64	\$10,000	\$36,364
Improvements Taken						\$0
Relocation						\$0
Damages						\$0
Subtotal						\$36,364
<u>Net Cost</u>						\$36,364
<u>Scheduling Contingency</u>						\$20,000
<u>Admn/Court Cost</u>						\$33,818
<u>Inflation Factor</u>						<u>\$36,073</u>
<u>Right of Way Total</u>						<b>\$126,255</b>

### Summary

Highway	\$1,166,400	
Bridges	\$564,000	
Signals	\$0	
ITS	\$0	
Construction Subtotal	\$1,730,400	
CEI	\$173,040	10% of construction subtotal
Construction Estimate	\$1,903,440	construction subtotal plus CEI
Preliminary Engineering	\$173,040	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$126,255	
Utility Relocation	\$34,608	2% of construction subtotal
<b>Total Cost</b>	<b>\$2,237,343</b>	

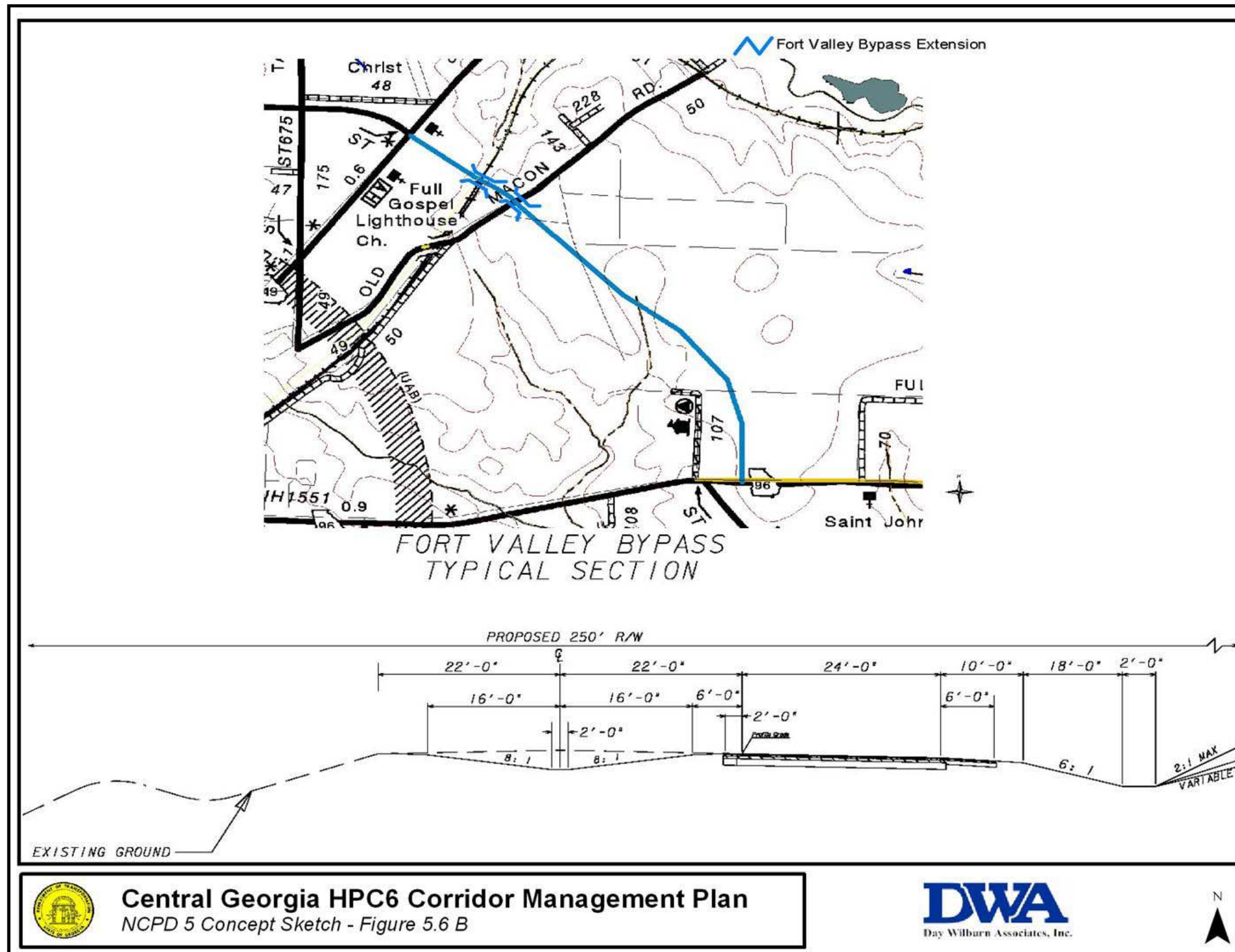


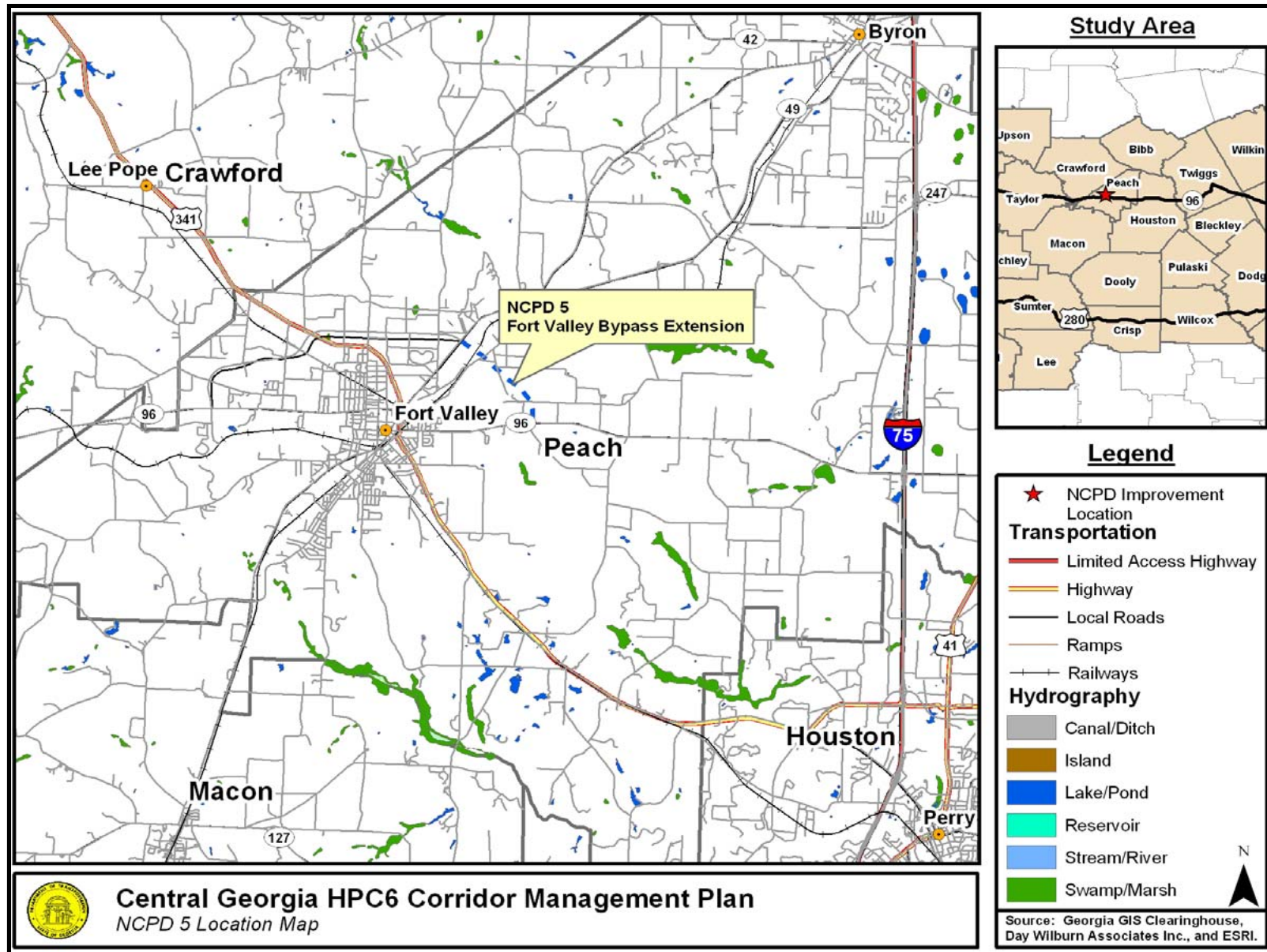


# CENTRAL GEORGIA HPC6 CORRIDOR MANAGEMENT PLAN

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to relieve congestion in downtown Fort Valley and provide an alternate route for traffic passing through the area. Congestion is present along SR 96 in downtown Fort Valley. An extension of the existing northern bypass (SR 49C) to connect SR 96 on the east and west sides of Fort Valley would relieve congestion in downtown Fort Valley. This additional capacity is necessary to accommodate future growth in traffic. Reduced congestion will create a safer environment for freight movement through the corridor. The bypass would eliminate delays currently encountered by allowing through traffic the option to avoid congestion frequently encountered by passing through the Fort Valley business district.				County		Peach																			
				Map Code		NCPD 5																			
				Route #		New location																			
				GDOT District		3																			
				Cong. District		3																			
				RDC		Middle Georgia																			
				Length		2.1 miles																			
				Mileposts																					
From: SR 49		To: SR 96																							
Year	1998	2025	Access Control	From: none To: partial	STRAHNET	No																			
Traffic Vol.:		13,405	% Increase in Capacity																						
Truck %:			% Increase in Travel Speed																						
No. of Lanes	N/A	2	% Shift in Non-Freight																						
<b>PROJECT DESCRIPTION:</b>  Construct 2.1 mile two-lane Fort Valley Bypass Extension on the northeast side of Fort Valley including a bridge over the railroad and Old Macon Road. Acquire right of way for future four lane divided section.																									
<b>COST ESTIMATE:</b> <table border="1"> <thead> <tr> <th>Project Phase</th> <th>Funding Source</th> <th>Total Cost Estimate</th> </tr> </thead> <tbody> <tr> <td>Preliminary Eng.</td> <td>NCPD</td> <td>\$460,187</td> </tr> <tr> <td>Right-of-Way</td> <td>NCPD</td> <td>\$10,448,000</td> </tr> <tr> <td>Utilities</td> <td>Local</td> <td>\$92,037</td> </tr> <tr> <td>Construction</td> <td>NCPD</td> <td>\$5,062,058</td> </tr> <tr> <td><b>Project Cost</b></td> <td></td> <td><b>\$16,062,000</b></td> </tr> </tbody> </table>								Project Phase	Funding Source	Total Cost Estimate	Preliminary Eng.	NCPD	\$460,187	Right-of-Way	NCPD	\$10,448,000	Utilities	Local	\$92,037	Construction	NCPD	\$5,062,058	<b>Project Cost</b>		<b>\$16,062,000</b>
Project Phase	Funding Source	Total Cost Estimate																							
Preliminary Eng.	NCPD	\$460,187																							
Right-of-Way	NCPD	\$10,448,000																							
Utilities	Local	\$92,037																							
Construction	NCPD	\$5,062,058																							
<b>Project Cost</b>		<b>\$16,062,000</b>																							





## Project Definition Initial Cost Estimate

<b>County</b>	Peach
<b>Map Code</b>	458
<b>Route</b>	SR 96
<b>Location Description</b>	SR 96 from SR 7C to US 341 in Fort Valley
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/23/02

### Recommendation Description

Extend Fort Valley Bypass as two lanes in enough right of way for a four lane divided section around the northeast side of town including bridges over the railroad and Old Macon Road.

### Highway Widening

	Length (mi)	Width	Unit Cost (per mi)	Total
	2.1	2 lanes	\$1,753,272	\$3,681,871
Source of Unit Cost	FDOT 2000 Transportation Costs		\$1,623,400	
Year	2000			
Adjustment to 2002	4% per year is growth factor of 1.08			

### Bridges

	Quantit	Length (ft)	Width (ft)	Area	Unit Cost	Total
over railroad	1	300	40	12,000	\$60	\$720,000
over Old Macon Road	1	300	40	12,000	\$60	<u>\$720,000</u>
Subtotal						\$1,440,000

### Signals

SR 49	\$100,000
SR 96	<u>\$100,000</u>
Subtotal	\$200,000

### ITS

none

### Right of Way

	Length (mi)	Width (ft)	Sq Ft	Acres	Unit Cost (per acre)	Total
<u>Urban</u>						
Land						
commercial						
industrial						
residential						
Improvements Taken						
Relocation						
Damages						
Subtotal						
<u>Rural</u>						
Land	2.1	250	2,772,000	63.64	\$30,000	\$1,909,091
Improvements Taken						\$500,000
Relocation						\$100,000
Damages						<u>\$500,000</u>
Subtotal						\$3,009,091
<u>Net Cost</u>						\$3,009,091
<u>Scheduling Contingency</u>						\$1,655,000
<u>Admn/Court Cost</u>						\$2,798,455
<u>Inflation Factor</u>						<u>\$2,985,018</u>
<u>Right of Way Total</u>						<b>\$10,447,564</b>

**Summary**

Highway	\$3,681,871	
Bridges	\$720,000	
Signals	\$200,000	
ITS	0	
Construction Subtotal	\$4,601,871	
CEI	\$460,187	10% of construction subtotal
Construction Estimate	\$5,062,058	construction subtotal plus CEI
Preliminary Engineering	\$460,187	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$10,447,564	
Utility Relocation	\$92,037	2% of construction subtotal
Total	\$16,061,847	



## Central Georgia HPC 6 Corridor Management Plan

### Project Worksheet

#### NEED AND PURPOSE:

The purpose of the project is to improve access to the Port of Savannah. Jimmy DeLoach Parkway provides an important four-lane connection from I-16 and I-95 to SR 21 near the Port of Savannah.

A two-lane extension of Jimmy DeLoach Parkway should be constructed from SR 21 to SR 25.

This corridor is proposed to be constructed as a 2-lane roadway with acquisition of right-of-way for four lanes. In 2025 the corridor is projected to have a LOS D. The roadway should be monitored to assess the need to be widened to four lanes.

County	Chatham
Map Code	NCPD 6
Route #	Jimmy DeLoach Parkway Extension
GDOT District	5
Cong. District	12
RDC	Coastal Georgia
Length	0.87 mile
Mileposts	
From: SR 21	To: SR 25

Year	1998	2025	Access Control	From: (New route) To: uncontrolled	STRAHNET	N/A
Traffic Vol.:	N/A	8,000	% Increase in Capacity	New route		
Truck %:	0%	40%	% Increase in Travel Speed	New route		
No. of Lanes	N/A	2	% Shift in Non-Freight			

#### PROJECT DESCRIPTION:

Construct Jimmy DeLoach Parkway Extension as a two lane rural section from SR 21 to SR 25. This road on new location is to align with existing SR 25 to the south. The SR 25 connection to the east that crosses the Savannah River is to T into this new road. Right of way for future widening to four lanes should be acquired.

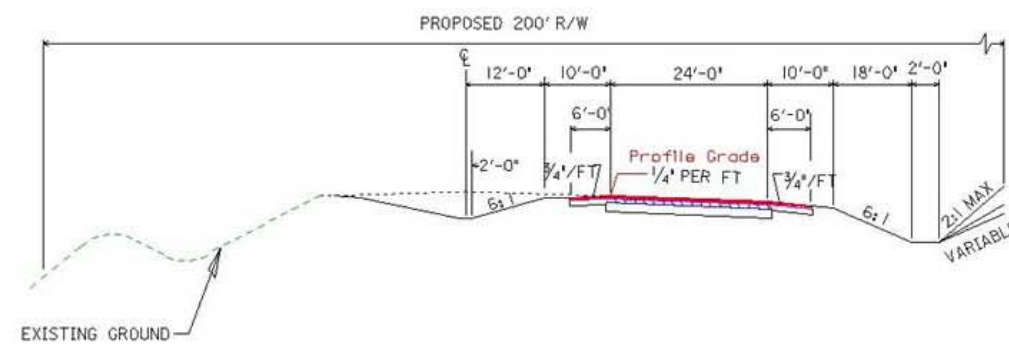
#### COST ESTIMATE:

Project Phase	Funding Source	Total Cost Estimate
Preliminary Eng.	NCPD	\$394,000
Right-of-Way	NCPD	\$10,216,000
Utilities	Local	\$197,000
Construction	NCPD	\$4,330,000
<b>Project Cost</b>		<b>\$15,137,000</b>





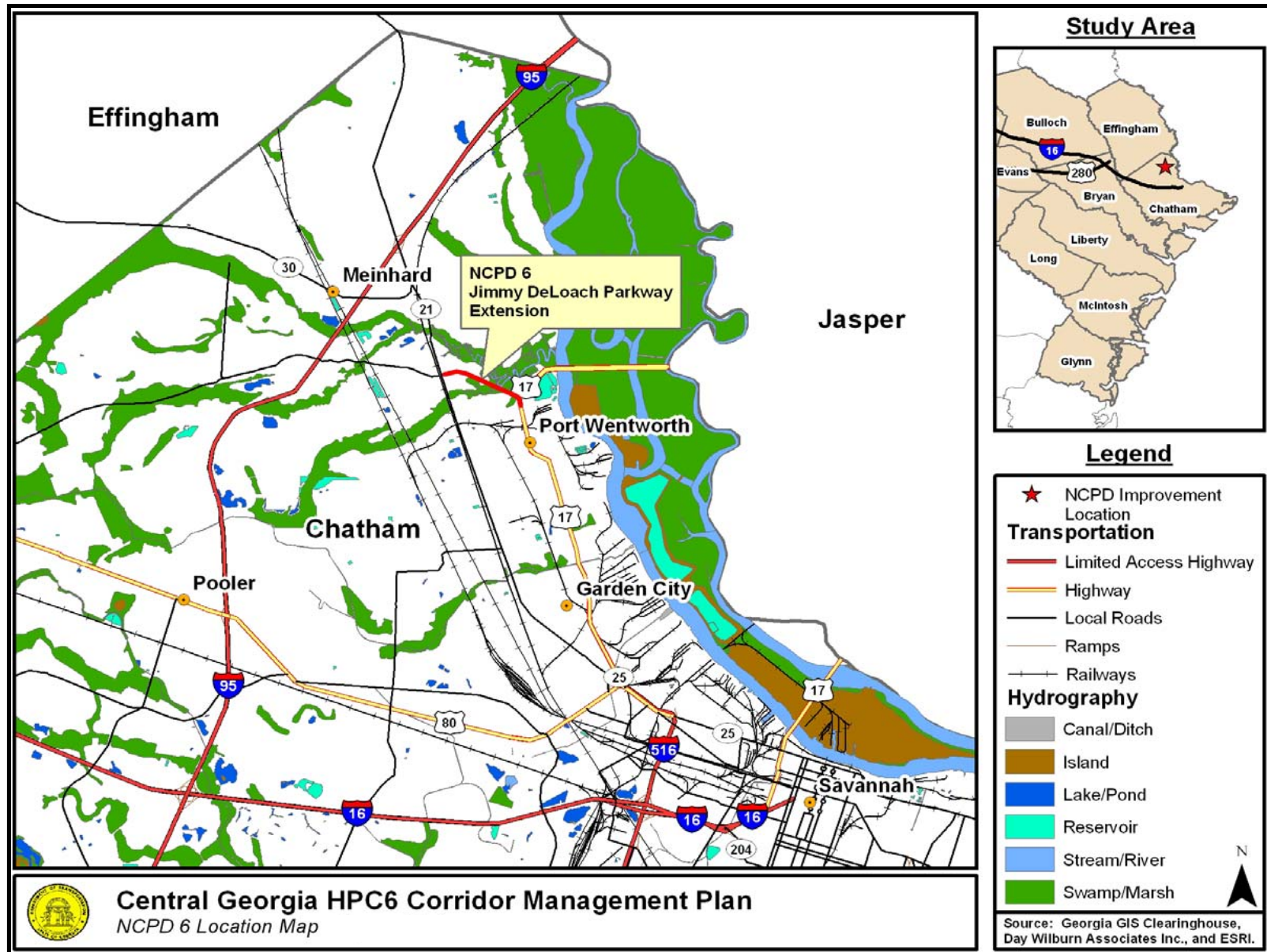
JIMMY DELOACH PARKWAY EXTENSION  
TYPICAL SECTION







## Central Georgia HPC 6 Corridor Management Plan



## Project Definition Initial Cost Estimate

<b>County</b>	Chatham
<b>Map Code</b>	601
<b>Route</b>	I-16
<b>Location Description</b>	Jimmy DeLoach Parkway Extension
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	1/10/03

### Recommendation Description

Extend Jimmy DeLoach Parkway (SR 30) from SR 21 to SR 25.  
Construct a two lane road off-center in right of way for a future four lane divided road.

### Highway

	Length (mi)	Width	Unit Cost	Total
	0.87	2 lanes	\$1,753,272	<b>\$1,525,347</b>
Source of Unit Cost			FDOT 2000 Transportation Costs	
Year			2000	\$1,623,400
Adjustment to 2002			4% per year is growth factor of 1.08	

### Bridges

Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
1070	36	38,520	\$60	\$2,311,200

### Signals

New Signal at Jimmy DeLoach/SR 170	1	\$100,000	\$100,000
------------------------------------	---	-----------	-----------

### ITS

none

### Right of Way

	Area (ac)		Unit Cost	Total
<u>Urban</u>				
Land				
commercial	2.0	9.48%	\$275,000	\$550,000
potentially commercial	1.1	5.21%	\$150,000	\$165,000
residential	1.5	7.11%	\$55,000	\$82,500
marsh/wetlands	<u>16.5</u>	78.20%	\$30,000	<u>\$495,000</u>
land subtotal	21.1			\$1,292,500
Improvements Taken				\$800,000
Relocation				\$50,000
Damages				<u>\$800,000</u>
Subtotal				<b>\$2,942,500</b>

### Rural

Land  
Improvements Taken  
Relocation  
Damages  
Subtotal

<u>Net Cost</u>	\$2,942,500
<u>Scheduling Contingency</u>	\$1,618,375
<u>Admn/Court Cost</u>	\$2,736,525
<u>Inflation Factor</u>	<u>\$2,918,960</u>
<u>Right of Way Total</u>	<b>\$10,216,360</b>

**Summary**

Highway	\$1,525,347	
Bridge	\$2,311,200	
Signals	\$100,000	
ITS	\$0	
Construction Subtotal	\$3,936,547	
CEI	\$393,655	10% of construction subtotal
Construction Estimate	\$4,330,201	construction subtotal plus CEI
Preliminary Engineering	\$393,655	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$10,216,360	
Utility Relocation	\$196,827	5% of construction subtotal
Total	<b>\$15,137,043</b>	

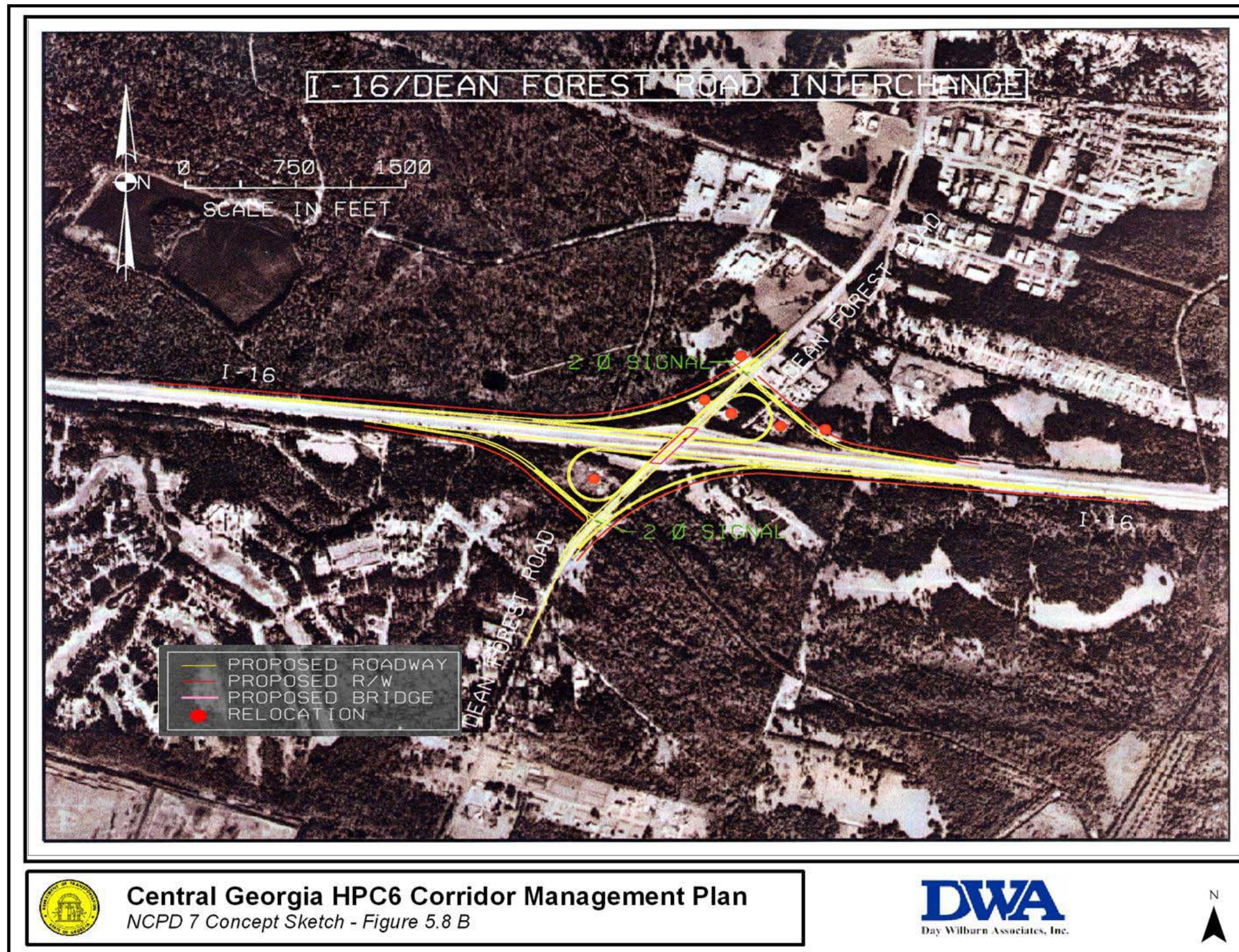


# Central Georgia HPC 6 Corridor Management Plan

## Project Worksheet

<b>NEED AND PURPOSE:</b>  The purpose of the project is to improve access to the Port of Savannah. SR 307 (Dean Forest Road) provides the most direct truck connection to the Port of Savannah from I-16. Existing ramps are relatively short, and sometimes queues of eastbound trucks exiting at SR 307 extend onto the through lanes of I-16. Longer entrance and exit ramps are needed to handle existing and future traffic volumes. The longer ramps would remove the queues of vehicles from travel lanes and promote a safer travel environment.  Several of the traffic movements are heavy, and directional ramps may be needed to more effectively handle future traffic volumes.  Because this interchange is a gateway to the Port of Savannah, a high capacity interchange configuration is preferred to make access to the Port as efficient as possible.				County		Chatham																		
				Map Code		NCPD 7																		
				Route #		I-16																		
				GDOT District		5																		
				Cong. District		12																		
				RDC		Coastal Georgia																		
				Length		0.09 mile																		
				Mileposts																				
From: I-16		To: SR 307																						
Year	1998	2025	Access Control	From: controlled To: controlled	STRAHNET	No																		
Traffic Vol.:	17,000	43,000	% Increase in Capacity	150%																				
Truck %:	20%	30%	% Increase in Travel Speed	20%																				
No. of Lanes			% Shift in Non-Freight	0%																				
<b>PROJECT DESCRIPTION:</b>  Reconstruct SR 307/I-16 interchange with longer entrance and exit ramps and directional ramps as necessary.																								
<b>COST ESTIMATE:</b> <table border="1"> <thead> <tr> <th>Project Phase</th> <th>Funding Source</th> <th>Total Cost Estimate</th> </tr> </thead> <tbody> <tr> <td>Preliminary Eng.</td> <td>NCPD</td> <td>\$954,000</td> </tr> <tr> <td>Right-of-Way</td> <td>NCPD</td> <td>\$15,563,000</td> </tr> <tr> <td>Utilities</td> <td>Local</td> <td>\$763,000</td> </tr> <tr> <td>Construction</td> <td>NCPD</td> <td>\$10,494,000</td> </tr> <tr> <td><b>Project Cost</b></td> <td></td> <td><b>\$27,774,000</b></td> </tr> </tbody> </table>							Project Phase	Funding Source	Total Cost Estimate	Preliminary Eng.	NCPD	\$954,000	Right-of-Way	NCPD	\$15,563,000	Utilities	Local	\$763,000	Construction	NCPD	\$10,494,000	<b>Project Cost</b>		<b>\$27,774,000</b>
Project Phase	Funding Source	Total Cost Estimate																						
Preliminary Eng.	NCPD	\$954,000																						
Right-of-Way	NCPD	\$15,563,000																						
Utilities	Local	\$763,000																						
Construction	NCPD	\$10,494,000																						
<b>Project Cost</b>		<b>\$27,774,000</b>																						

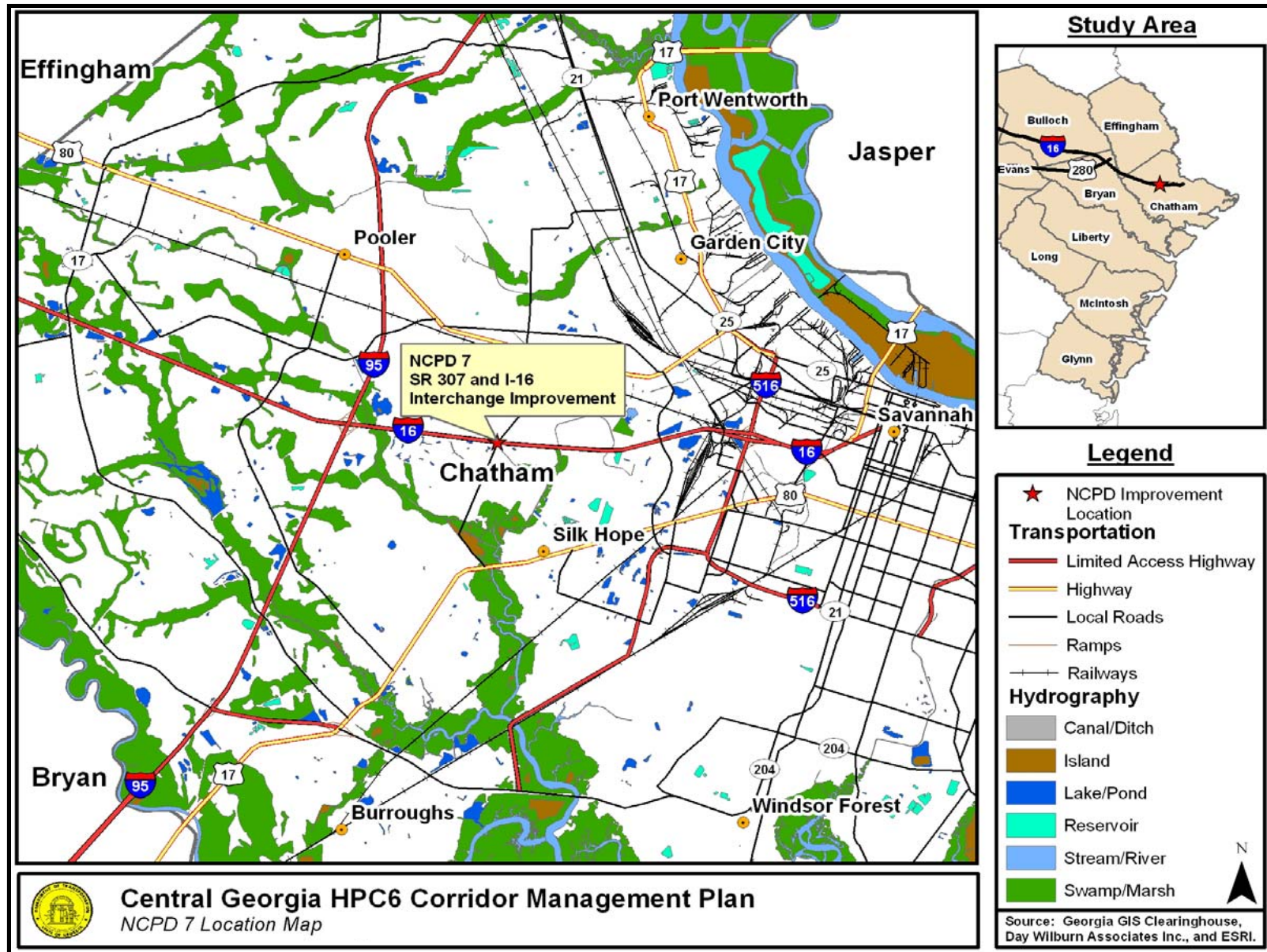








## Central Georgia HPC 6 Corridor Management Plan



## Project Definition Initial Cost Estimate

<b>County</b>	Chatham
<b>Map Code</b>	600
<b>Route</b>	I-16
<b>Location Description</b>	I-16/SR 307 Interchange
<b>Prepared By</b>	David Low
<b>Date Last Updated</b>	12/20/02

### Recommendation Description

Reconstruct SR 307/I-16 interchange with longer entrance and exit ramps and directional ramps as necessary.

### Highway Widening

	Length (mi)	Width	Unit Cost	Total
Interchange Reconstruction				\$8,000,000
Source of Unit Cost		similar interchanges		

### Bridges

	Length (ft)	Width (ft)	Area (sq ft)	Unit Cost	Total
Dean Forest Road over I-16			22,000	\$60	\$1,320,000

### Signals

2	\$100,000	\$200,000
---	-----------	-----------

### ITS

	# Units	Unit Cost	Total
CCTV at strategic locations	2	\$10,000	\$20,000

### Right of Way

	Area (ac)	Unit Cost	Total
<u>Urban</u>			
Land			
commercial	8.3	\$275,000	\$2,282,500
potentially commercial	3.8	\$150,000	\$570,000
residential	6.0	\$55,000	<u>\$330,000</u>
land subtotal			\$3,182,500
Improvements Taken			\$400,000
Relocation			\$150,000
Damages			<u>\$750,000</u>
Subtotal			\$4,482,500
<u>Rural</u>			
Land			
Improvements Taken			
Relocation			
Damages			
Subtotal			
<u>Net Cost</u>			\$4,482,500
<u>Scheduling Contingency</u>			\$2,465,375
<u>Admn/Court Cost</u>			\$4,168,725
<u>Inflation Factor</u>			<u>\$4,446,640</u>
<u>Right of Way Total</u>			<b>\$15,563,240</b>

### Summary

Interchange Reconstruction	\$8,000,000	
Bridge	\$1,320,000	
Signals	\$200,000	
ITS	\$20,000	
Construction Subtotal	\$9,540,000	
CEI	\$954,000	10% of construction subtotal
Construction Estimate	\$10,494,000	construction subtotal plus CEI
Preliminary Engineering	\$954,000	10% of construction subtotal includes 1% concept, 1% environmental document, 8% design
Right of Way	\$15,563,240	
Utility Relocation	\$763,200	8% of construction subtotal
<b>Total</b>	<b>\$27,774,440</b>	